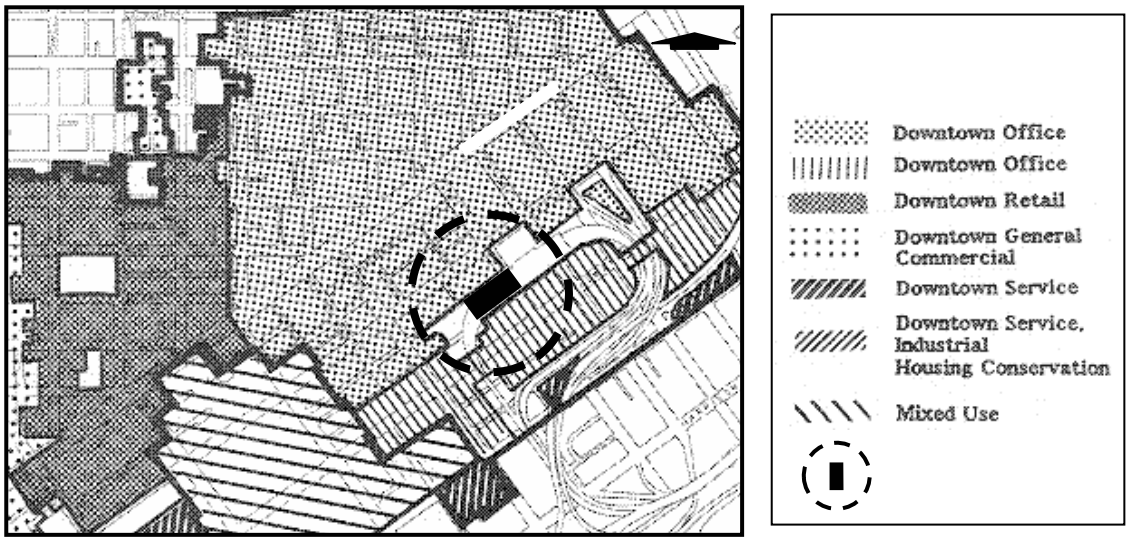


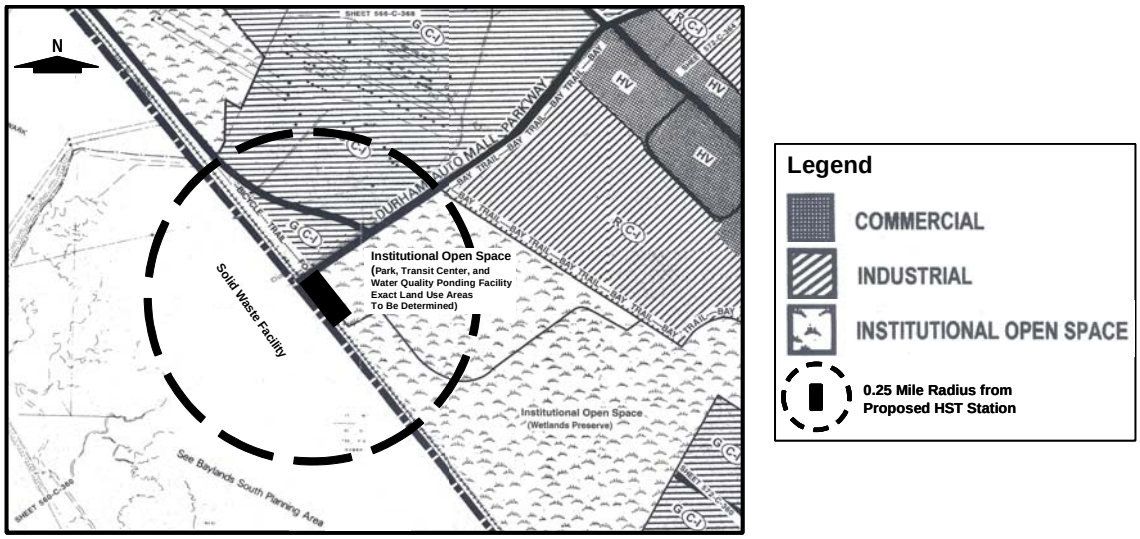
Figure 2.3-27: Future Land Use in the Transbay Terminal Station Area

New Transbay Terminal/ Caltrain Downtown Extension/ Terminal Area Development. The Federal Transit Administration (FTA), the JPB, the City and County of San Francisco, the San Francisco Redevelopment Agency, and the Transbay Joint Powers Authority are currently planning for a new Transbay Terminal in the heart of the City's Financial District/South of Market Area at First and Mission streets. Included in this proposal is a new multi-modal Transbay Terminal, an extension of Caltrain 1.5 miles from its current terminus at Fourth and King to the basement of the new terminal, and over seven million square feet of transit oriented development in the area surrounding the new terminal. This facility would serve as a major multi-modal center for the employment center of San Francisco, with direct access to multiple modes of transit including AC transit, MUNI, and Greyhound buses, Caltrain commuter rail, paratransit services, and a possible underground connection to a BART station on Market Street. The proposed new terminal would allow for high-speed train service.

2.3.3.3 San Jose-to-Oakland

Auto Mall Parkway Station Area

The Auto Mall Parkway station area is located within the Fremont Industrial Planning Area. As shown in Figure 2.3-28, future planned land use in the station area is predominately industrial and institutional open space to the east and agricultural and open space to the west. The East Bay Solid Waste Facility is directly east of the station location. The City's land use plan expects approximately two-thirds of the currently available industrial land to develop during the planning period with a variety of high technology, manufacturing, warehousing and wholesaling uses.

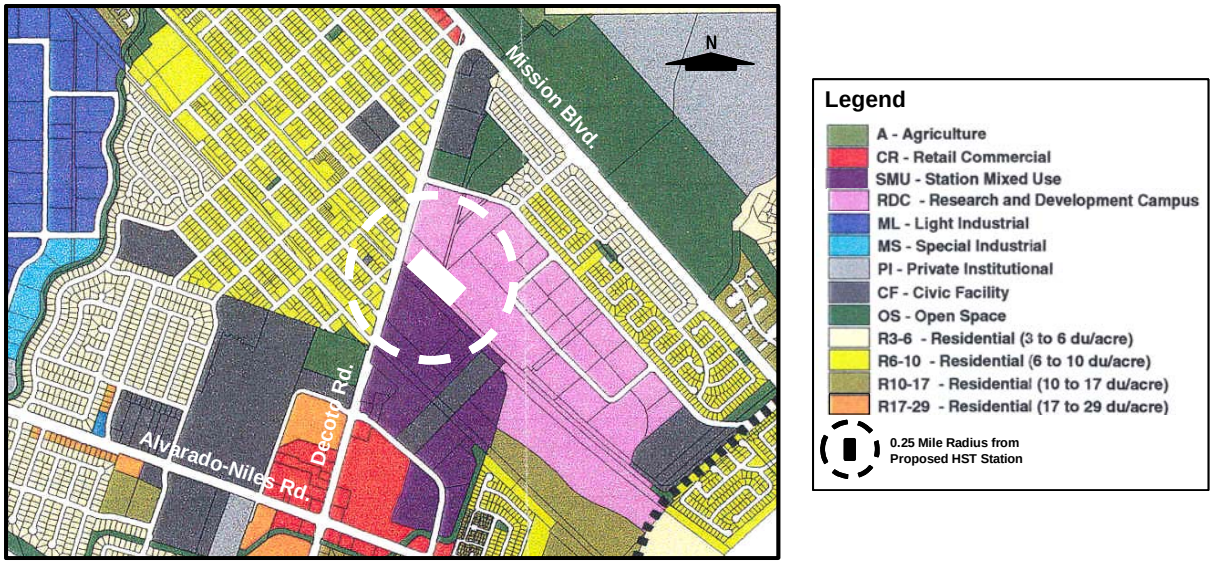


Source: City of Fremont General Plan Land Use Map (Amended September 1996); Parsons, 2003.

Figure 2.3-28 Future Land Use in the Auto Mall Parkway Station Area

Union City Station Area

Station District. The *Union City 2002 General Plan Policy Document* establishes the Station District as the community's greatest opportunity for redevelopment of underutilized and vacant lands around the existing BART station. In total, there are about 200 acres of lands in the greater Station District area. Approximately, 150 acres are proposed for development or redevelopment over the twenty year period of the General Plan. The District consists of three subareas that are delineated by the tracks. The most northeasterly area is the interior of the existing Decoto Industrial Park. This area is envisioned to support a research and development campus (designated RDC). The central area of the Station District includes the PG&E and PSSC sites. These properties are proposed for more intensive uses including research and development, light industrial and office uses. The lands on the southwest side of the BART station are know as the BART and Litke properties. Litke is interested in redeveloping this property with a multi-family residential project. The BART station, located at the center of the Station District, is targeted for expansion into a major regional transit hub. As discussed above and shown on Figure 2.3-29, future planned land use within a quarter mile of the Union City Station area include station mixed use, research and development, and residential.



Source: Union City General Plan Land Use Diagram (Revised February 2002); Parsons, 2003.

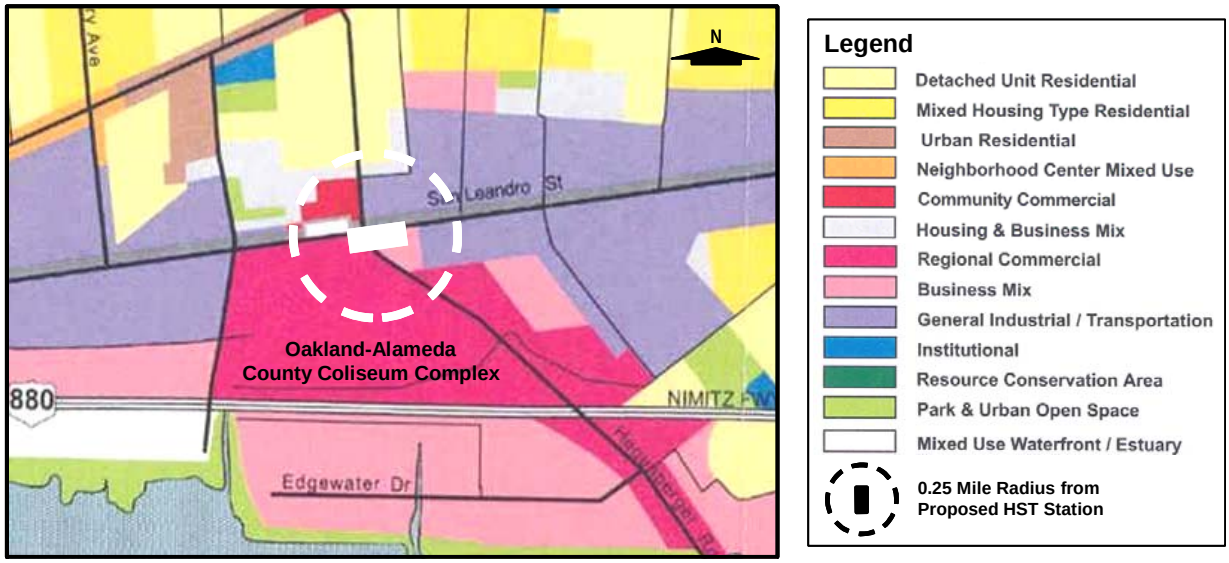
Figure 2.3-29 Future Land Use in the Union City Station Area

Dumbarton Rail Corridor. An extension of Caltrain commuter rail service in the 11-mile Dumbarton Rail Corridor is planned for implementation within the next three to five years. This extension would link Alameda County with San Mateo County via the Dumbarton Railroad Bridge. The project includes approximately 11 miles of mostly single-track railroad, signals, grade crossings, railroad trestles and two swingk bridges. The San Mateo County Transportation Authority purchased the right-of-way in 1994. Service would operate between Redwood Junction and Neward Junction on the Centerville Line, continuing on the Centerville Line from Neward Junction to the Union City BART station.

Coliseum BART Station Area

The Coliseum BART Station area is designated by the *City of Oakland General Plan* as a Transit Oriented District and as an intermodal transfer point. The station area is located at the edge of two distinct districts: single-family residential neighborhoods and the Coliseum Area Showcase. The Transit Oriented District has been established to aid the transition between neighborhoods and the regional attractions at the Coliseum/Airport and vicinity. Any new future land uses that capitalize on the station's location and ridership must be designed to be compatible with adjoining housing. Future land use in the Coliseum BART Station area is shown below in Figure 2.3-30.

Coliseum Redevelopment Area. Economic development planning and implementation are key objectives for the Coliseum Redevelopment Area, which was established in 1984 and encompasses 6,500 acres. The General Plan envisions the Coliseum complex at the center of a regional shopping, entertainment and recreation district. The Coliseum area is at the center of the City's largest concentration of regional commercial uses.

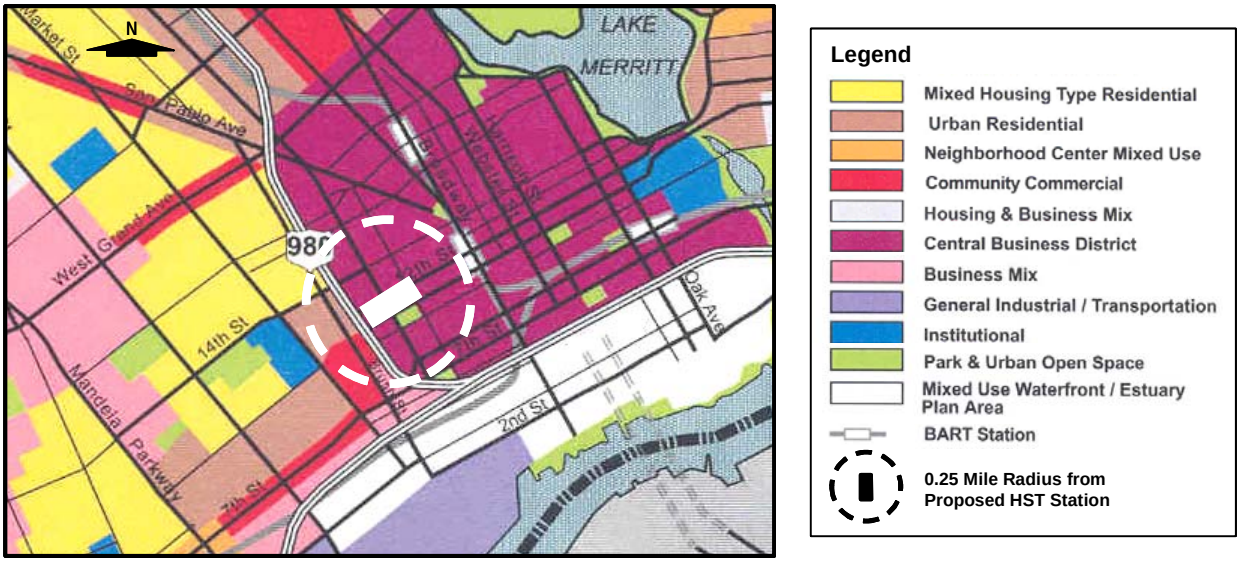


Source: City of Oakland General Plan Land Use Diagram (Adopted March 1998); Parsons, 2003.

Figure 2.3-30 Future Land Use in the Coliseum BART Station Area

12th Street/City Center Station

The 12th Street/City Center Station area is located in the heart of downtown Oakland and is designated as a Transit Oriented District by the *City of Oakland General Plan*. As shown in Figure 2.3-31, future land use in the vicinity of the station is primarily related to development of the Central Business District. Future planned land use includes mixed use commercial, office and residential development that reinforce the area's urban quality and pedestrian-orientation. Key goals for the downtown area, as stated in the *City of Oakland General Plan,* support growth in office activity and increasing the population through new downtown housing.

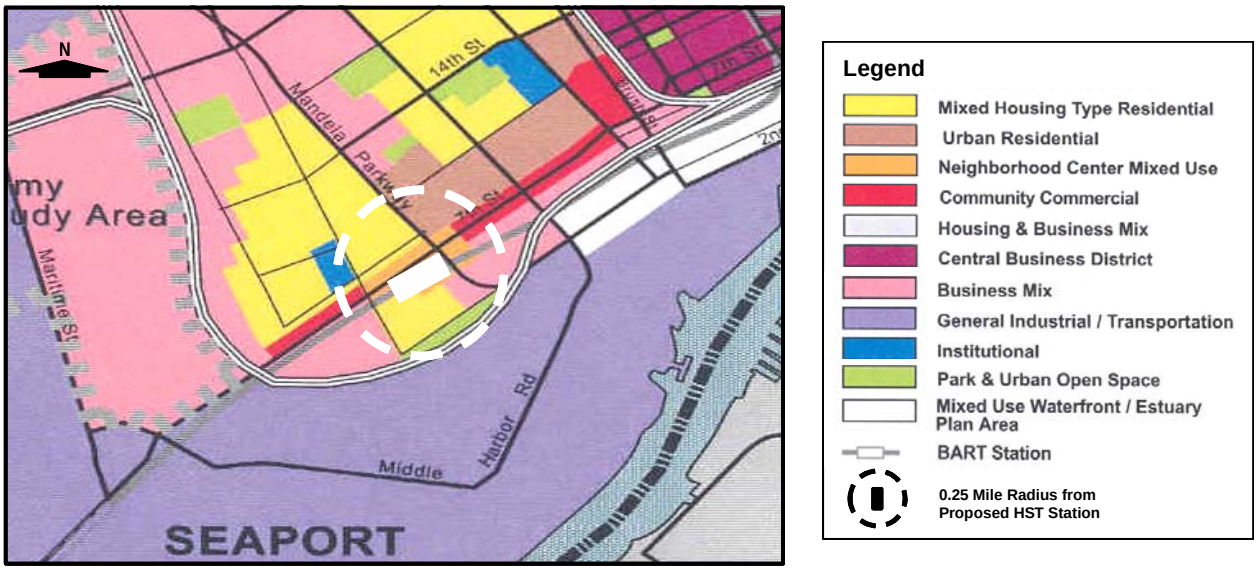


Source: City of Oakland General Plan Land Use Diagram (Adopted March 1998); Parsons, 2003.

Figure 2.3-31 Future Land Use in the 12th Street/City Center Station Area

West Oakland Station

The West Oakland Station area is designated as a Transit Oriented District by the *City of Oakland General Plan.* While the station area has primarily served commuter travel and parking needs, an increased intensity of use is anticipated over the planning period. The Plan supports the beautification of the new Cypress Freeway (Mandela Parkway) corridor and the establishment of a transit village near the BART station. Future planned land use in the West Oakland Station Area is shown in Figure 2.3-32, below.



Source: City of Oakland General Plan, Land Use Diagram (Adopted March 1998); Parsons, 2003.

Figure 2.3-32 Future Land Use in the West Oakland Station Area

2.4 POPULATION CHARACTERISTICS

For the purposes of the socioeconomic analysis, the immediate study area is defined by the U.S. Census block groups within a quarter-mile buffer on either side of the rail and highway corridors, rail stations and facilities, and airport facilities. In addition, data for these described areas are also compared to demographic conditions and projections for San Francisco, Alameda, San Mateo, Santa Clara, Merced, Stanislaus, San Benito, Madera, Contra Costa, Solano, Yolo, Sacramento and San Joaquin Counties, and the cities of San Francisco, Oakland, Union City, Fremont, Millbrae, Redwood City, Palo Alto, Santa Clara, San Jose, Morgan Hill, Gilroy and Los Banos.

Demographic characteristics of the affected environment are derived from the *2000 U.S. Census Bureau, Association of Bay Area Governments (ABAG): Forecasts for the San Francisco Bay Area to the Year 2025, Sacramento Area Council of Governments, Merced County Association of Governments, and Madera, San Benito and Stanislaus counties.*

2.4.1 Population: Trends and Growth

Population growth trends and projections (1990 thru 2020) for the 13 counties and the 12 cities that have jurisdiction over the study area are shown in Table 2.4-1. Between 1990 and 2000, the population growth for the counties varied from seven percent in the heavily populated San Francisco County to 45 percent in the sparsely populated San Benito County. According to ABAG projections for the year 2020, San Francisco County would experience a population growth of four percent and Madera County would grow by 82 percent. The population of the City of Los Banos is projected to increase by 119 percent by 2020.

Table 2.4- 1: Population Growth Trends and Projections 1990-2020

	1990	2000	2020	Absolute Change 1990-2000	Percent Change 1990-2000	Absolute Change 2000-2020	Percent Change 2000-2020
COUNTIES							
Madera	88,090	123,109	224,600	35,019	40%	101,491	82%
Merced	178,403	210,554	319,785	32,151	18%	109,231	52%
San Benito	36,697	53,234	86,800	16,537	45%	33,566	63%
Stanislaus	370,522	446,997	712,100	76,475	21%	265,103	59%
Santa Clara	1,497,577	1,682,585	2,007,500	185,008	12%	324,915	19%
Alameda	1,276,702	1,443,741	1,669,400	167,039	13%	225,659	16%
San Mateo	649,623	707,161	795,100	57,538	9%	87,939	12%
San Francisco	723,959	776,733	811,100	52,774	7%	34,367	4%
Contra Costa	803,732	948,816	1,179,500	145,084	18%	230,684	24%
Solano	340,421	394,542	547,100	54,121	16%	152,558	39%
Yolo	141,092	165,220	247,905	24,128	17%	82,685	50%
Sacramento	1,041,219	1,218,860	1,646,045	177,641	17%	427,185	35%
San Joaquin	480,628	566,600	821,851	85,972	18%	255,251	45%

Table 2.4- 1: Population Growth Trends and Projections 1990-2020

	1990	2000	2020	Absolute Change 1990-2000	Percent Change 1990-2000	Absolute Change 2000-2020	Percent Change 2000-2020
CITIES							
Los Banos	14,519	24,106	52,681	9,587	66%	28,575	119%
Gilroy	31,487	48,065	72,900	16,578	53%	24,835	52%
Morgan Hill	23,928	38,156	54,400	14,228	59%	16,244	43%
San Jose	782,248	941,998	1,121,400	159,750	20%	179,402	19%
Santa Clara	93,613	102,361	128,300	8,748	9%	25,939	25%
Fremont	173,339	203,413	228,300	30,074	17%	24,887	12%
Union City	53,762	66,883	82,200	13,121	24%	15,317	23%
Oakland	372,242	399,484	440,000	27,242	7%	40,516	10%
Palo Alto	55,900	71,914	81,700	16,014	29%	9,786	14%
Redwood City	66,072	99,210	110,100	33,138	50%	10,890	11%
Millbrae	20,412	20,718	22,600	306	1%	1,882	9%
San Francisco	723,959	776,733	811,100	52,774	7%	34,367	4%

Sources: Association of Bay Area Governments *Forecasts for the San Francisco Bay Area to the Year 2025* (December, 2001); Sacramento Area Council of Governments; San Joaquin Council of Governments; Merced County Association of Governments; Madera County; San Benito County; Stanislaus County; 1990 U.S. Census Data.

2.4.2 Household Size

A household, as defined by the U.S. Census Bureau, is a group of people, related or not, living together in a dwelling unit. Table 2.4-2 compares 2000 data for household characteristics in the study area to those of the 13 counties and the 12 cities.

2.4.2.1 Modal Alternative

Highway Improvement Options. All of the highway corridors have household sizes comparable to their respective county jurisdictions. As shown in Table 2.4-2, over 65 percent of households in all of the corridors are family households. The I-80 Corridor (San Francisco to I-880) segment has the lowest percentages of family households and the highest percentages of single-person households.

Aviation Improvement Options. Over 50 percent of the households in the airport improvement study areas are family households. The Oakland International Airport (OAK) study area has a lower percentage of family households and a higher percentage of single-person households as compared to the San Jose International Airport (SJC) study area. The percentages of single-person households near OAK and SJC are comparable to the percentages within the respective city and county jurisdictions.

2.4.2.2 High-Speed Train Alternative

Alignment Options. As shown in Table 2.4-2, all of the study area alignments have household sizes comparable to that of the cities and counties under whose jurisdiction they fall. The Merced-to-San Jose alignment options have the greatest average household size with over 50 percent of households consisting of three or more persons. The San Jose-to-Oakland alignment options are comparable, with 48 and 49 percent of households consisting of three or more persons. Approximately 33 percent of households within the San Jose-to-San Francisco segment have three or more persons. Over 70 percent

of the households in the Merced-to-San Jose segment were family households, as compared to 50 percent in the San Jose-to-San Francisco segment.

Station Options. Most of the station options evaluated under the San Jose-to-San Francisco segment have lower percentages of households with three or more persons and family households as compared to the San Jose-to-Oakland and San Jose-to-Merced station options. Only three percent of the households in the San Francisco Transbay Terminal study area have three or more persons as compared to 30 percent in the City of San Francisco. The Union City and Coliseum BART station areas in the San Jose-to-Oakland segment have the highest average household size. All four of the station option study areas along the San Jose-to-Merced segment have over 50 percent of households with three or more persons.

Table 2.4-2 Household Characteristics

	Total Number of Households	Average Household Size						Total Number of Families	%
		1-person		2- Person		3-or-more person			
		Number of households	%	Number of households	%	Number of households	%		
MODAL ALTERNATIVE									
U.S. 101 CORRIDOR									
San Francisco to SFO	16,529	3,898	24%	4,543	27%	8,088	49%	10,576	64%
SFO to Redwood City	17,224	5,232	30%	5,289	31%	6,703	39%	10,544	61%
Redwood City to I-880	34,307	9,057	26%	10,272	30%	14,978	44%	22,306	65%
I-880 to San Jose	2,051	462	23%	577	28%	1,012	49%	1,488	73%
San Jose to Gilroy	31,141	3,648	12%	6,948	22%	20,545	66%	25,888	83%
Gilroy to SR-152	2,009	230	11%	323	16%	1,456	72%	1,683	84%
TOTAL	**101,210**	**22,065**	**22%**	**27,375**	**27%**	**51,770**	**51%**	**72,485**	**72%**
I-880 CORRIDOR									
I-80 to I-238	14,053	3,817	27%	4,581	33%	5,655	40%	8,876	63%
I-238 to Fremont/Newark	14,366	3,733	26%	3,751	26%	6,882	48%	9,654	67%
Fremont/Newark to U.S. 101	30,616	4,894	16%	8,264	27%	17,458	57%	24,312	79%
TOTAL	**59,035**	**12,444**	**21%**	**16,596**	**28%**	**29,995**	**51%**	**42,842**	**73%**
SR-152 CORRIDOR									
U.S. 101 to I-5	1,428	203	14%	415	29%	810	57%	1,152	81%
I-5 to SR-99	6,718	1,158	17%	1,660	25%	3,900	58%	5,334	79%
TOTAL	**8,146**	**1,361**	**17%**	**2,075**	**25%**	**4,710**	**58%**	**6,486**	**80%**
I-80 CORRIDOR									
San Francisco to I-880	6,275	3,342	53%	2,112	34%	821	13%	1,793	29%
I-880 to I-5 (Sacramento)	76,280	18,229	24%	24,223	32%	33,828	44%	51,708	68%
TOTAL	**82,555**	**21,571**	**26%**	**26,335**	**32%**	**34,649**	**42%**	**53,501**	**65%**

I-580 CORRIDOR									
I-880 to I-5 (via I-238)	**32,581**	**6,961**	**21%**	**10,461**	**32%**	**15,159**	**47%**	**23,400**	**72%**

	Number of Households	Average Household Size						Total Number of Families	%
		1-person		2-person		3-or-more person			
		Number of households	%	Number of households	%	Number of households	%		
AIRPORT IMPROVEMENT									
Oakland International Airport									
	1,780	530	30%	567	32%	683	38%	917	52%
San Jose International Airport									
	2,781	649	23%	983	35%	1,149	41%	1,949	70%
Santa Clara	565,863	121,079	21%	171,907	30%	272,877	48%	399,765	71%

HIGH-SPEED TRAIN ALTERNATIVE	**Total Number of Households**	**Average Household Size**						**Total Number of Families**	**%**
		1-person		**2- Person**		**3-or-more person**			
		Number of Households	**%**	**Number of Households**	**%**	**Number of Households**	**%**		
SEGMENT AND ALIGNMENT									
Merced to San Jose: • Northern Tunnel Option • Tunnel Under Park Option • Minimize Tunnel Option	27,785	5,726	21%	7,825	28%	14,234	51%	20,228	73%
• Gilroy Bypass Option	33,661	6,708	20%	9,159	27%	17,794	53%	24,721	73%
• Gilroy Option	37,348	7,075	19%	9,861	26%	20,412	55%	27,905	75%
San Jose to San Francisco	120,130	42,742	36%	37,233	31%	40,155	33%	64,591	54%
San Jose to Oakland: • Mulford Line Option	61,608	14,856	24%	16,941	27%	29,811	48%	41,880	68%
• I-880 Option	62,393	14,640	23%	17,294	28%	30,459	49%	43,226	69%

	Number of Households	Average Household Size							
		1-person		2-person		3-or-more person			
		Number of Households	%	Number of Households	%	Number of Households	%	Total Number of Families	%
STATION OPTIONS									
Los Banos Station	566	93	16%	160	28%	313	55%	443	78%
Gilroy Station	1,232	149	12%	310	25%	773	63%	1,052	85%
Morgan Hill Station	1,715	293	17%	443	26%	979	57%	1,273	74%
San Jose/Diridon Station	1,462	759	52%	447	31%	256	18%	502	34%
Santa Clara Station	503	78	16%	121	24%	304	60%	365	73%
Auto Mall Parkway Station	240	54	23%	84	35%	102	43%	173	72%
Union City Station	1,144	75	7%	161	14%	908	79%	1,020	89%
Coliseum BART Station	236	53	22%	16	7%	167	71%	180	76%
12th Street/City Center Station (Oakland)	464	237	51%	148	32%	79	17%	210	45%
West Oakland Station	946	238	25%	238	25%	470	50%	625	66%
Palo Alto Station	2,482	1,564	63%	729	29%	189	8%	648	26%
Redwood City Station	1,613	767	48%	436	27%	410	25%	680	42%
SFO Airport Station	914	252	28%	288	32%	374	41%	566	62%
Fourth & King Station	345	161	47%	131	38%	53	15%	77	22%
Transbay Terminal	251	196	78%	47	19%	8	3%	26	10%

	Number of Households	Average Household Size						Total Number of Families	%
		1-person		2-person		3-or-more person			
		Number of Households	%	Number of Households	%	Number of Households	%		
COUNTIES									
Madera	36,155	5,977	17%	11,448	32%	18,730	52%	28,890	80%
Merced	63,815	11,327	18%	16,946	27%	35,542	56%	50,136	79%
San Benito	15,885	2,241	14%	4,300	27%	9,344	59%	13,018	82%
Stanislaus	145,146	28,188	19%	41,627	29%	75,331	52%	110,249	76%
Santa Clara	565,863	121,079	21%	171,907	30%	272,877	48%	399,765	71%
Alameda	523,366	136,055	26%	157,550	30%	229,761	44%	342,048	65%
San Mateo	254,103	62,647	25%	81,009	32%	110,447	43%	172,557	68%
San Francisco	329,700	127,350	39%	102,550	31%	99,800	30%	147,186	45%
Contra Costa	344,129	78,780	23%	110,259	32%	155,090	45%	243,971	71%
Solano	130,403	25,461	20%	39,022	30%	65,920	51%	98,163	75%
Yolo	59,375	13,825	23%	18,864	32%	26,686	45%	37,687	63%
Sacramento	453,602	120,946	27%	143,270	32%	189,386	42%	299,738	66%
San Joaquin	181,629	37,613	21%	51,686	28%	92,330	51%	135,419	75%

	Number of Households	Average Household Size						Total Number of Families	%
		1-person		2- Person		3-or-more person			
		Number of Households	%	Number of Households	%	Number of Households	%		
CITIES									
Los Banos	7,721	1,220	16%	1,945	25%	4,556	59%	6,225	81%
Gilroy	11,869	1,702	14%	2,842	24%	7,325	62%	9,590	81%
Morgan Hill	10,846	1,643	15%	3,333	31%	5,870	54%	8,628	80%
San Jose	276,598	50,938	18%	76,262	28%	149,398	54%	203,681	74%
Santa Clara	38,526	9,987	26%	12,972	34%	15,567	40%	24,100	63%
Fremont	68,237	11,287	17%	20,278	30%	36,672	54%	52,228	77%
Union City	18,642	2,100	11%	4,290	23%	12,252	66%	15,700	84%
Oakland	150,790	48,952	32%	42,872	28%	58,966	39%	86,347	57%
Palo Alto	25,216	8,209	33%	8,502	34%	8,505	34%	14,593	58%
Redwood City	28,060	7,618	27%	8,999	32%	11,443	41%	17,902	64%
Millbrae	7,956	1,994	25%	2,701	34%	3,261	41%	5,511	69%
San Francisco	329,700	127,376	39%	102,564	31%	99,760	30%	145,186	44%

Source: 2000 U.S. Census Data

2.4.3 Ethnicity Mix

An ethnicity profile of the study area population was derived from 2000 U.S Census data. The racial categories used are White, Black or African American, Hispanic, Native Hawaiian and Other Pacific Islander, Asian, American Indian and Alaska Native, Some Other Race and Two or More Races.

2.4.3.1 Modal Alternative

Highway Improvement Options. As shown in Table 2.4-3, over 50 percent of the population along the Modal Alternative alignments, with the exception of the I-580 Corridor, are members of minority groups, with high concentrations of Asian and Hispanic people. The U.S. 101 and I-880 corridors have the highest percentages of ethnic populations with minorities representing 68 percent of the total population along both corridors. The I-80 Corridor from San Francisco to Sacramento is the most ethnically diverse of the alignments with the Black or African American, Hispanic and Asian populations each representing over 15 percent of the total population. Percentages of Hispanic and Asian populations are highest along the SR 152 Corridor and the I-880 Corridor, respectively.

Aviation Improvement Options. Over 50 percent of the population in the vicinity of the OAK and SJC aviation improvement options are members of minority groups. Approximately 33 percent of the total population in the Oakland International Airport study area are Asian, which is substantially higher than the City of Oakland percentage for this ethnic group. In the San Jose International Airport study area, Hispanic populations represent 32 percent of the total population, which is comparable to the City of San Jose.

2.4.3.2 High-Speed Train Alternative

Alignment Options. As shown in Table 2.4-3, over 50 percent of the populations along all of the high-speed train segments and alignment options are members of minority groups, including high concentrations of Hispanic and Asian populations. There is greater ethnic diversity along the San Jose-to-Oakland and San Jose-to-Merced segments as compared to the San Jose-to-San Francisco segment. Asian populations are most concentrated along the San Jose-to-Oakland segment, with 23 and 24 percent, for the respective Mulford Line and I-880 alignment options. Percentages of Hispanic

populations are highest along the San Jose-to-Merced segment, particularly along the Gilroy alignment option.

Station Options. The San Jose-to-Oakland segment station options have the highest percentages of minority populations, in particular in the Union City, Coliseum BART, and West Oakland station areas. In the Coliseum and West Oakland stations areas, the Black population accounts for 50 and 55 percent of the total population, respectively, while these populations account for only 35 percent in the City of Oakland. Hispanic populations near the Union City Station represent 67 percent of the population, as compared to 24 percent in Union City. Sixty-three percent of the total population in the Auto Mall Parkway Station area is Asian, which is substantially higher than that for the City of Fremont (37 percent). The Asian population is also higher in the 12th Street Station area as compared to the City of Oakland. The Gilroy and Los Banos station areas along the San Jose-to-Merced segment have high concentration of Hispanic populations, with 51 and 52 percent, respectively.

Table 2.4-3 Ethnic Composition in the Study Area

	Total Population	White	%	Black or African American	%	Hispanic	%
MODAL ALTERNATIVE							
HIGHWAY IMPROVEMENT OPTIONS							
U.S. 101 CORRIDOR							
San Francisco to SFO	52,289	14,141	27%	4,412	8%	16,557	32%
SFO to Redwood City	45,064	20,960	47%	1,417	3%	12,226	27%
Redwood City to I-880	99,896	36,379	36%	6,539	7%	32,823	33%
I-880 to San Jose	6,614	1,779	27%	184	3%	2,780	42%
San Jose to Gilroy	118,993	31,719	27%	3,652	3%	49,096	41%
Gilroy to SR-152	9,463	1,307	14%	17	>0.5%	7,854	83%
TOTAL	**332,319**	**106,285**	**32%**	**16,221**	**5%**	**121,336**	**37%**
I-880 CORRIDOR							
I-80 to I-238	44,363	6,433	15%	10,682	24%	13,848	31%
I-238 to Fremont/Newark	98,447	34,990	36%	5,936	6%	23,621	24%
Fremont/Newark to U.S. 101	38,468	16,999	44%	1,407	4%	7,922	21%
TOTAL	**181,278**	**58,422**	**32%**	**18,025**	**10%**	**45,391**	**25%**
SR-152 CORRIDOR							
U.S. 101 to I-5	5,334	2,094	39%	20	>0.5%	2,828	53%
I-5 to SR-99	22,270	8,929	40%	756	3%	11,200	50%
TOTAL	**27,604**	**11,023**	**40%**	**776**	**3%**	**14,028**	**51%**
I-80 CORRIDOR							
San Francisco to I-880	13,722	7,098	52%	1,763	13%	1,462	11%
I-880 to I-5 (Sacramento)	212,621	95,416	45%	34,979	16%	36,219	17%
TOTAL	**226,343**	**102,514**	**45%**	**36,742**	**16%**	**37,681**	**17%**

I-580 CORRIDOR								
I-880 to I-5 (via I-238)	**94,166**		**56,312**	**60%**	**6,883**	**7%**	**13,828**	**15%**
	Native Hawaiian/ Other Pacific Islander	**%**	**Asian**	**%**	**American Indian/ Alaska Native**	**%**	**Two or More Races/ Some Other Race (Alone)**	**%**
U.S. 101 CORRIDOR								
San Francisco to SFO	75	>0.5%	14,416	28%	727	1%	1,961	4%
SFO to Redwood City	45	>0.5%	7,752	17%	950	2%	1,714	4%
Redwood City to I-880	298	>0.5%	18,931	19%	1,749	2%	3,177	3%
I-880 to Gilroy	13	>0.5%	1,628	25%	0	0%	230	3%
San Jose to Gilroy	638	>0.5%	30,462	26%	349	>0.5%	3,077	3%
Gilroy to SR-152	-	>0.5%	153	2%	3	>0.5%	129	1%
TOTAL	**1,069**	**>0.5%**	**73,342**	**22%**	**3,778**	**1%**	**10,288**	**3%**
I-880 CORRIDOR								
I-80 to I-238	121	>0.5%	11,508	26%	210	>0.5%	1,561	4%
I-238 to Fremont/Newark	380	>0.5%	27,626	28%	729	1%	5,165	5%
Fremont/Newark to U.S. 101	116	>0.5%	10,761	28%	37	>0.5%	1,226	3%
TOTAL	**617**	**>0.5%**	**49,895**	**28%**	**976**	**1%**	**7,952**	**4%**
SR-152 CORRIDOR								
U.S. 101 to I-5	26	>0.5%	150	3%	13	>0.5%	203	4%
I-5 to SR-99	146	1%	495	2%	43	>0.5%	701	3%
TOTAL	**172**	**1%**	**645**	**2%**	**56**	**>0.5 %**	**904**	**3%**
I-80 CORRIDOR								
San Francisco to I-880	89	1%	2,818	21%	17	>0.5%	475	3%
I-880 to I-5 (Sacramento)	984	>0.5%	33,435	16%	1,198	1%	10,390	5%
TOTAL	**1,073**	**>0.5%**	**36,253**	**16%**	**1,215**	**1%**	**10,865**	**5%**
I-580 CORRIDOR								
I-880 to I-5 (via I-238)	**533**	**1%**	**12,507**	**13%**	**275**	**>0.5 %**	**3,828**	**4%**
	Total Population		**White**	**%**	**Black or African American**	**%**	**Hispanic**	**%**
AIRPORT IMPROVEMENT								
Oakland International Airport								
	7,395		3,411	46%	389	5%	698	9%
San Jose International Airport								
	5,638		2,591	46%	128	2%	1,807	32%

	Native Hawaiian/ Other Pacific Islander	%	Asian	%	American Indian/ Alaska Native	%	Two or More Races/ Some Other Race (Alone)	%
AIRPORT IMPROVEMENT								
Oakland International Airport								
	47	1%	2,473	33%	14	>0.5%	363	5%
San Jose International Airport								
	3	>0.5%	835	15%	20	>0.5%	254	5%

HIGH-SPEED TRAIN ALTERNATIVE	**Total Population**	**White**	**%**	**Black or African American**	**%**	**Hispanic**	**%**
SEGMENTS AND ALIGNMENT OPTIONS							
Merced to San Jose: • Northern Tunnel Option • Tunnel Under Park Option • Minimize Tunnel Option	87,941	31,721	36%	3,177	4%	33,277	38%
• Gilroy Bypass Option	109,132	41,045	38%	3,736	3%	44,102	40%
• Gilroy Option	123,970	44,457	36%	3,956	3%	54,646	44%
San Jose to San Francisco	302,741	145,961	48%	15,790	5%	69,800	23%
San Jose to Oakland: • Mulford Line Option	185,033	51,467	28%	23,514	13%	56,683	31%
• I—880 Option	166,663	48,054	29%	16,186	10%	53,253	32%

	Native HI/ Other Pacific Islander	%	Asian	%	American Indian/ AK Native	%	Two or More Races/ Some Other Race (Alone)	%
Merced to San Jose • Northern Tunnel Option • Tunnel Under Park Option • Minimize Tunnel Option	898	1%	15,139	17%	192	0.5%	3,537	4%
• Gilroy Bypass Option	851	1%	15,623	14%	262	0.5%	3,513	3%
• Gilroy Option	851	1%	16,115	13%	273	0.5%	3,672	3%
San Jose to San Francisco	693	0.5%	56,995	19%	2,632	1%	10,870	4%
San Jose to Oakland: • Mulford Line Option	828	0.5%	43,089	23%	1,088	1%	8,364	5%
• I-880 Option	917	0.5%	40,286	24%	905	1%	6,307	4%

	Total Population	White	%	Black or African American	%	Hispanic	%
STATION OPTIONS							
Los Banos Station	1857	745	40%	13	1%	957	52%
Gilroy Station	4335	1784	41%	0	0%	2228	51%
Morgan Hill Station	5296	3231	61%	71	1%	1619	31%
San Jose/Diridon Station	2732	1447	53%	94	3%	679	25%
Santa Clara Station	1799	505	28%	66	4%	613	34%
Auto Mall Parkway Station	632	175	28%	7	1%	22	3%
Union City Station	5087	495	10%	101	2%	3424	67%
Coliseum BART Station	884	0	0%	442	50%	206	23%
12th Street/City Center Station (Oakland)	1676	256	15%	510	30%	287	17%
West Oakland Station	2996	258	9%	1644	55%	696	23%
Palo Alto Station	3870	2957	76%	76	2%	150	4%
Redwood City Station	4241	2186	52%	314	7%	1207	28%
SFO Airport Station	2692	1369	51%	27	1%	585	22%
Fourth & King Station	708	440	62%	41	6%	42	6%
Transbay Terminal	313	226	72%	0	0%	7	2%

	Native Hawaiian / Other Pacific Islander	%	Asian	%	American Indian/ Alaska Native	%	Two or More Races/ Some Other Race (Alone)	%
Los Banos Station	13	1%	26	1%	26	1%	77	4%
Gilroy Station	0	0%	230	5%	0	0%	93	2%
Morgan Hill Station	0	0%	281	5%	0	0%	94	2%
San Jose/Diridon Station	0	0%	332	12%	19	1%	161	6%
Santa Clara Station	19	1%	405	23%	28	2%	163	9%
Auto Mall Parkway Station	0	0%	399	63%	0	0%	29	5%
Union City Station	26	1%	818	16%	6	0.1%	217	4%
Coliseum BART Station	0	0%	207	23%	0	0%	29	3%
12th Street/City Center Station (Oakland)	27	2%	575	34%	0	0%	21	1%
West Oakland Station	0	0%	285	10%	0	0%	113	4%
Palo Alto Station	0	0%	594	15%	6	0.2%	87	2%
Redwood City Station	0	0%	404	10%	5	0.1%	125	3%
SFO Airport Station	167	6%	443	16%	0	0%	101	4%
Fourth & King Station	0	0%	156	22%	0	0%	29	4%
Transbay Terminal	0	0%	80	26%	0	0%	0	0%

	Total Population	White	%	Black or African American	%	Hispanic	%
COUNTIES							
Madera	123,109	57,641	47%	4,552	4%	54,483	44%
Merced	210,554	84,807	40%	7,299	3%	95,610	45%
San Benito	53,234	24,338	46%	502	1%	25,580	48%
Stanislaus	446,997	254,650	57%	9,957	2%	141,926	32%
Santa Clara	1,682,585	741,000	44%	42,454	3%	404,012	24%
Alameda	1,443,741	589,243	41%	208,559	14%	273,887	19%
San Mateo	707,161	351,542	50%	23,312	3%	154,392	22%
San Francisco	776,733	338,886	44%	57,819	8%	109,565	14%
Contra Costa	948,816	547,837	58%	85,496	9%	168,059	18%
Solano	394,542	193,819	49%	56,055	14%	69,606	18%
Yolo	168,660	97,551	58%	3,037	2%	43,747	26%
Sacramento	1,223,499	705,922	58%	116,166	9%	195,613	16%
San Joaquin	563,598	265,960	47%	35,321	6%	172,027	31%

	Native Hawaiian / Other Pacific Islander	%	Asian	%	American Indian / Alaska Native	%	Two or More Races / Some Other Race (Alone)	%
Madera	247	.5%	1,481	1%	1,831	2%	2,874	2%
Merced	243	.5%	14,209	7%	1,065	1%	7,321	4%
San Benito	87	.5%	1,014	2%	265	1%	1,448	3%
Stanislaus	1,672	.5%	17,870	4%	3,342	1%	17,580	4%
Santa Clara	5,088	.5%	427,130	25%	5,342	.5%	57,559	3%
Alameda	8,729	1%	291,493	20%	5,548	.5%	66,282	5%
San Mateo	8,374	1%	140,850	20%	1,434	.5%	27,257	4%
San Francisco	3,379	.5%	238,597	31%	2,054	.5%	26,433	3%
Contra Costa	3,094	>0.5%	102,065	11%	3,697	>0.5 %	38,568	4%
Solano	2,940	1%	49,047	12%	2,549	1%	20,526	5%
Yolo	702	>0.5%	15,731	9%	1,076	1%	6,816	4%
Sacramento	5,947	>0.5%	132,908	11%	9,161	1%	57,782	5%
San Joaquin	1,553	>0.5%	63,201	11%	3,404	1%	22,132	4%

	Total Population	White	%	Black or African American	%	Hispanic	%
CITIES							
Los Banos	25,869	10,290	40%	1,007	4%	13,048	50%
Gilroy	41,464	15,767	38%	615	1%	22,298	54%
Morgan Hill	33,556	20,583	61%	537	2%	9,229	28%
San Jose	894,943	322,534	36%	29,495	3%	269,989	30%
Santa Clara	102,361	49,392	48%	2,237	2%	16,364	16%
Fremont	203,413	84,149	41%	6,084	3%	27,409	13%
Union City	66,869	13,610	20%	4,321	6%	16,020	24%
Oakland	399,484	93,953	24%	140,139	35%	87,467	22%
Palo Alto	58,589	42,682	73%	1,166	2%	2,722	5%
Redwood City	75,402	40,656	54%	1,791	2%	23,557	31%
Millbrae	20,718	11,674	56%	154	1%	2,376	11%
San Francisco	776,733	338,886	44%	57,819	8%	109,565	14%

	Native Hawaiian / Other Pacific Islander	%	Asian	%	American Indian/ Alaska Native	%	Two or More Races/ Some Other Race (Alone)	%
Los Banos	72	.5%	552	2%	121	.5%	779	3%
Gilroy	74	.5%	1,658	4%	193	.5%	859	2%
Morgan Hill	50	.5%	1,966	6%	179	1%	1,012	3%
San Jose	3,093	.5%	238,378	27%	2,959	.5%	28,495	3%
Santa Clara	416	.5%	29,791	29%	275	.5%	3,886	4%
Fremont	736	0.4%	74773	37%	656	0.3%	32381	16%
Union City	577	1%	28,780	43%	132	.5%	3,429	5%
Oakland	1,866	.5%	60,393	15%	1,471	.5%	14,195	4%
Palo Alto	81	.5%	10,056	17%	88	.5%	1,803	3%
Redwood City	635	1%	6,604	9%	165	.5%	1,994	3%
Millbrae	227	1%	5,614	27%	24	.5%	649	3%
San Francisco	3,379	.5%	238,597	31%	2,054	.5%	26,433	3%

Source: 2000 U.S. Census Data

2.4.4 Income

According to the 2000 U.S. Census, the average poverty threshold for a family of four, including two children under the age of 18, is an annual income of $17,603.

2.4.4.1 Modal Alternative

Highway Improvement Options. As shown in Table 2.4-4, the overall percentages of persons below poverty level along the Modal Alternative Corridors are highest along the SR-152 Corridor and lowest along the I-580 Corridor. Low-income populations are most concentrated along the U.S. 101 Corridor (Gilroy to SR-152) and the I-880 Corridor (I-80 to I-238) segments, with 23 and 22 percent of persons below poverty level, respectively.

Aviation Improvement Options. The overall percentages of persons below poverty level in the airport improvement study areas are five percent near Oakland International Airport (OAK) and 14 percent near San Jose International Airport (SJC). The percentage of low-income populations in the SJC study area is slightly higher than the percentages of these populations within the City of San Jose and County of Santa Clara.

2.4.4.2 High-Speed Train Alternative

Alignment Options. The percentages of low-income populations along all of the rail segments and alignment options are comparable to the percentages of these populations within the larger jurisdictions that encompass the study areas. Low-income populations are most concentrated along the San Jose-to-Oakland segment.

Station Options. As shown in Table 2.4-4, the Auto Mall Parkway, Coliseum BART, 12th Street/City Center, and West Oakland station areas have substantial concentrations of low-income populations. The percentage of people under the poverty level is highest in the Coliseum Bart Station study area, with 54 percent below poverty level. Low-income populations in the Auto Mall Parkway Station study area are substantially higher than that in the City of Fremont. The 12th Street and West Oakland stations have a low-income population of 38 and 37 percent, respectively, which are much higher than percentages for the City of Oakland. The remaining stations along all of the rail segments have low-income populations that are comparable to that of the larger jurisdictions that encompass the station areas.

Table 2.4-4 Low-Income Populations in the Study Area

	Persons Below Poverty Level	Percent Below Poverty Level
MODAL ALTERNATIVE		
HIGHWAY IMPROVEMENT OPTIONS		
U.S. 101 CORRIDOR		
San Francisco to SFO	5,273	10%
SFO to Redwood City	3,212	7%
Redwood City to I-880	8,951	9%
I-880 to San Jose	711	11%
San Jose to Gilroy	11,846	10%
Gilroy to SR-152	2,042	23%
TOTAL	**31,324**	**10%**
I-880 CORRIDOR		
I-80 to I-238	9,522	22%
I-238 to Fremont/Newark	6,244	6%
Fremont/Newark to U.S. 101	3,402	9%
TOTAL	**19,168**	**11%**

	Persons Below Poverty Level	Percent Below Poverty Level
SR-152 CORRIDOR		
U.S. 101 to I-5	790	15%
I-5 to SR-99	3,894	18%
TOTAL	**4,684**	**17%**
I-80 CORRIDOR		
San Francisco to I-880	2,428	20%
I-880 to I-5 (Sacramento)	20,630	10%
TOTAL	**23,058**	**11%**
I-580 CORRIDOR		
I-880 to I-5 (via I-238)	**4,626**	**5%**
AVIATION IMPROVEMENT OPTIONS	**Persons Below Poverty Level**	**Percent Below Poverty Level**
Oakland International Airport		
	401	5%
San Jose International Airport		
	643	14%
HIGH-SPEED TRAIN ALTERNATIVE	**Persons Below Poverty Level**	**Percent Below Poverty Level**
SEGMENT AND ALIGNMENT OPTIONS		
Merced to San Jose: • Northern Tunnel Option • Tunnel Under Park Option • Minimize Tunnel Option	10,737	12%
• Gilroy Bypass Option	11,187	10%
• Gilroy Option	13,173	11%
San Jose to San Francisco	24,539	8%
San Jose to Oakland:		
• Mulford Line Option	24,362	13%
• I-880 Option	24,139	13%
	Persons Below Poverty Level	**Percent Below Poverty Level**
STATION OPTIONS		
Los Banos Station	432	24%
Gilroy Station	355	8%
Morgan Hill Station	224	4%
San Jose/Diridon Station	340	13%
Santa Clara Station	79	4%
Auto Mall Parkway Station	135	22%
Union City Station	544	11%
Coliseum BART Station	469	54%
12th Street/City Center Station (Oakland)	371	38%
West Oakland Station	1,101	37%
Palo Alto Station	145	4%
Redwood City Station	126	4%

	Persons Below Poverty Level	Percent Below Poverty Level
SFO Airport Station	85	3%
Fourth & King Station	40	6%
Transbay Terminal	38	12%
	Persons Below Poverty Level	**Percent Below Poverty Level**
COUNTIES		
Madera	24,514	21%
Merced	45,059	22%
San Benito	5,241	10%
Stanislaus	70,406	16%
Santa Clara	124,470	8%
Alameda	156,804	11%
San Mateo	40,692	6%
San Francisco	86,585	11%
Contra Costa	71,575	8%
Solano	31,344	8%
Yolo	29,787	18%
Sacramento	169,784	14%
San Joaquin	97,105	18%
	Persons Below Poverty Level	**Percent Below Poverty Level**
CITIES		
Los Banos	3,094	12%
Gilroy	4,250	10%
Morgan Hill	1,558	4%
San Jose	77,893	9%
Santa Clara	7,786	8%
Fremont	10,915	5%
Union City	4,340	7%
Oakland	76,489	19%
Palo Alto	2,801	5%
Redwood City	4,418	6%
Millbrae	693	3%
San Francisco	86,585	11%

Source: 2000 U.S. Census Data

2.5 NEIGHBORHOOD AND COMMUNITY CHARACTERISTICS

Neighborhood and community characteristics along the High-Speed Train alignment options and in the vicinity of proposed rail station locations are derived from aerial photos and other available mapping of the study area, and from the General Plans, as described in Section 2.2.

2.5.1 Existing Neighborhood and Community Characteristics Along the High-Speed Train Alignment Corridors and Station Locations

2.5.1.1 Merced-to-San Jose

Existing neighborhood and community characteristics along each of the five Merced-to-San Jose alignment options and respective station locations are described below.

Northern Tunnel Option

The northern tunnel alignment option would begin at either the BNSF rail corridor or the UPRR corridor near the town of Atwater, north of Merced. The Castle Airport is located east of Winton near the BNSF alignment terminus. The UPRR terminus segment would pass through the town of Livingston to join the primary alignment. The corridor extends west across the San Joaquin Valley through agricultural lands, passing north of the town of Newman. After crossing the California Aqueduct, the tracks would pass through the Diablo Mountain Range in a series of tunnels, passing north of Henry Coe State Park and the Andersen Reservoir. The alignment would then cross over U.S. 101 and SR-85, passing by a single-family residential area and the Monterey Oaks Mobile Home Park. North of SR-85 in San Jose, the alignment would connect with the Caltrain/UPRR rail corridor.

Heading north, between SR-85 and Capital Expressway, the corridor passes by neighborhoods consisting primarily of single-family homes and neighborhood parks with adjacent commercial/service establishments. North of Capitol Expressway, the tracks proceed west to the Guadalupe Freeway past the Oak Hill Cemetery. Proceeding north along the Guadalupe Freeway, between Curner Avenue and I-280, a single-family residential neighborhood and Biebrach Park is located just south of I-280. The alignment continues north from I-280 where it terminates at the San Jose/Diridon Station.

Tunnel Under Park Option

Neighborhood characteristics in the vicinity of the Tunnel Under Park alignment option are comparable to the Northern Tunnel Option between its eastern terminus north of Merced and the California Aqueduct. At the Diablo Mountain range, the alignment heads to the southwest crossing primarily in tunnel under the Henry W. Coe State Park. The corridor then crosses over U.S. 101 and SR-85, connects with the Caltrain/UPRR rail corridor north of SR-85 and continues to the San Jose/Diridon Station through the neighborhood areas described above.

Minimize Tunnel Option

Community characteristics in the vicinity of the Minimize Tunnel alignment option are similar to the Tunnel Under Park Option except that it would cross at-grade through a portion of the Henry W. Coe State Park. The corridor would cross over U.S. 101 and SR-85, connect with the Caltrain/UPRR rail corridor north of SR-85 and continue through neighborhoods to the San Jose/Diridon Station, as described above.

Gilroy Bypass

The Gilroy Bypass alignment option extends west from Merced through the San Joaquin Valley agricultural lands. The Valley State Prison for Women is located in the vicinity of the Chowchilla terminus. The corridor continues along Washington Road and Henry Miller Avenue, passing north of the City of Los Banos to the Los Banos station option location, east of I-5 and north of Henry Miller Avenue in the community of Santa Nella. Businesses east of the station area consist primarily of gas stations, restaurants and truck stops serving motorists traveling on I-5.

Los Banos Station Area to Morgan Hill Station Area. From the Los Banos Station area, the alignment would continue west across agricultural land and cross the Delta Mendota Canal and the California Aqueduct. The corridor would then pass primarily in tunnel north of the O'Neill Forebay Wildlife Area, San Joaquin National Cemetery, and San Luis Reservoir, continuing beneath the San Luis National Wildlife Reserve until it aligns with the Pacheco Pass. At the east end of the lower Pacheco Creek Valley, the route would return at-grade, cross over I-152 and continue along the southwest portion of the valley floor. From the Pacheco Creek Valley, the alignment would pass north of the City of Gilroy through Santa Clara Valley agricultural lands, cross U.S. 101 and connect with the Caltrain/UPRR rail corridor just north of the City.

Agricultural fields are predominant along both sides of the alignment between Gilroy and Morgan Hill. The Llagas Creek Reservoir, South County Airport and San Martin Vineyards are located to the east of the rail tracks, between Masten and San Martin avenues. Single-family residential neighborhoods are located along the corridor in the southern portion of the city. Industrial and commercial/service-type businesses increase as the alignment approaches the Morgan Hill station area. The station area is located in the Morgan Hill downtown area that extends along Monterey Road, between Main Street and Dunne Avenue. A diverse mix of retail, service and office businesses are located downtown. A residential neighborhood is located east of the station area. The tracks pass the Central High Continuation School and a fire station in the northern segment of town.

North of Morgan Hill, agricultural fields are predominant on the west side of the tracks and Coyote Creek and Park and the Riverside Golf Course are located to the east. The Parkway Lakes, Metcalf Park and a mobile home park are adjacent to the alignment as it approaches SR-85. The corridor continues north from SR-85 to the San Jose/Diridon Station area. Neighborhoods in this section are described above under the Northern Tunnel Option.

Gilroy Option

The Gilroy alignment option would be similar to the Gilroy Bypass option except that it would extend further south to a station in the City of Gilroy. From the Pacheco Creek Valley, the corridor would continue south through the Santa Clara agricultural fields and connect with the UPRR alignment south of Gilroy. The corridor would pass by industrial and commercial/service –type businesses as it approaches the Gilroy Station location. A single-family neighborhood is located east of the station area. North of Gilroy, the alignment would continue to the Morgan Hill and San Jose/Diridon Station areas. Neighborhood characteristics in these respective sections are described above under the Gilroy Bypass and Northern Tunnel options.

2.5.1.2 San Jose-to-San Francisco

The San Jose-to-San Francisco segment begins at the San Jose/Diridon Station and continues within or immediately adjacent to the existing Caltrain corridor to the Transbay Terminal in San Francisco. A variety of neighborhoods and communities are along the rail right-of-way, as described below.

San Jose/Diridon Station Area to Santa Clara Station Area. The San Jose/Diridon Station area is located at the western end of the San Jose central business district. The HP Pavilion at San Jose, a multi-purpose recreational and trade facility, is located north of the station area. Heading north, the alignment passes by a single-family residential area and Bellarmine College Preparatory High School on the west. The Santa Clara station area is located near Santa Clara University and a multi-family residential neighborhood. The Norman Y. Mineta San Jose International Airport is located to the east of the station area.

Santa Clara Station Area to Palo Alto Station Area. Through the City of Santa Clara, neighborhoods to the west of the alignment are primarily single- and multi-family residential. The tracks pass by Bracher Park at Bowers Avenue before entering the City of Sunnyvale. Within Sunnyvale, the corridor continues along the boundaries of the East Murphy, Ponderosa, West Murphy and Washington neighborhood areas. Approximately two-thirds of the City's multi- and single-family residential areas are located south of the railroad corridor, while manufacturing and office-type businesses are concentrated to the north. The Sunnyvale Town Center is located on the west side of the alignment at Sunnyvale Avenue. Through Mountain View, the corridor passes by several single-family neighborhood areas. Rengstorff Park and Community Center and the Senior Citizen Center are located near the railroad right-of-way between Escuela and Rengstorff avenues.

In Palo Alto, the corridor passes by the Greenmeadow, Walnut Grove, Fair Meadow, El Carmelo, Old South Palo Alto, and Seale Addition neighborhood planning areas. These areas are mostly single-family residential neighborhoods located on the east side of the alignment. Commercial centers are primarily located west of the tracks and include South El Camino Real, California Avenue, Town and Country Village, and the University Avenue/Multi-modal Transit Station. Community facilities located from south to north along the rail tracks include Robles Park, the Ventura Community Center, Boulware Park, El Carmelo School, the County Courthouse, Bowden Park, and Peers Park. Palo Alto High School is located just south of the Palo Alto station area, beyond which is Stanford University and associated facilities. Other community facilities in proximity to the station area include Lytton Plaza, Palo Alto Senior Center, City Hall, and the Downtown Library. The Stanford Shopping Mall, El Camino Park and El Palo Park are located adjacent to the railroad corridor to the north of the station area.

Palo Alto Station Area to Redwood City Station Area. Through Menlo Park, the rail corridor passes by commercial-type businesses and a variety of multi- and single-family neighborhood areas. The Menlo Park Civic Center-Burgess Park Complex including the City Council Chambers, Administration Building, Police Station, Library and Recreation Center are located between the tracks and Laurel Street. Neighborhoods in the Town of Atherton mostly consist of low-density, single-family residences. The rail corridor passes by the Holbrook Palmer Park and the Menlo Park Town Hall. In Redwood City, the alignment crosses through the unincorporated portion of the North Fair Oaks neighborhood, and the incorporated Middlefield, Downtown and Centennial neighborhood areas. The unincorporated portion of the North Fair Oaks neighborhood is dominated by industrial businesses with commercial businesses located at Middlefield Road and Fifth Avenue. In this section, the rail corridor passes by a fire station, elementary school and a library. Commercial and industrial businesses are clustered around the corridor in the Middlefield neighborhood. The Redwood City station area is located in the Downtown neighborhood area that contains the City's major commercial and financial areas, the City offices, San Mateo County offices, the core of historic downtown, and a variety of public services. Kaiser Hospital is located east of the station area and Sequoia High School is located to the west. In the Centennial neighborhood, the corridor passes by multi- and single-family residential areas that are located south and north of Whipple Avenue, respectively.

Redwood City Station Area to SFO Airport Station Area. Neighborhoods adjacent to the corridor within San Carlos are composed primarily of single-family residences. Public facilities along the alignment include the civic center, post office, fire station, and Laureola Park. Within the City of Belmont, the tracks pass the civic center, post office, Alexander Park and two elementary schools. Within San Mateo, the

corridor passes through the Hillsdale, Hayward Park, Downtown, North Central and Northwest Heights neighborhood areas. In Hillsdale, the San Mateo County Exposition Building and the Bay Meadows Golf Course are located south of SR-92. Northwest of Hillsdale Boulevard is the Hillsdale Shopping Mall. Several parks are adjacent to the alignment, including Trinta, Central and Martin Luther King parks. In the Burlingame segment of the corridor, the tracks pass by commercial and industrial businesses and some residential areas. The tracks pass directly adjacent to Burlingame High School and Washington Park. In Millbrae, the tracks are primarily located near commercial and industrial business areas. The San Francisco International Airport is located east of the City. The Millbrae Station area is southeast of the Millbrae downtown district, and is immediately south of the Bayside Manor residential neighborhood. Most of the station area is occupied by commercial and light industrial businesses, high-density residential property and vacant parcels.

SFO Airport Station Area to Fourth and King Station Area. Within San Bruno, the alignment would pass by the Belle Air, Lomita Park and San Bruno Park neighborhood areas. These neighborhoods are primarily single-family with scattered duplexes and apartment buildings. Small second residential units also occur in these areas. Tanforan Park Shopping Center is located at the northern end of San Bruno. There are primarily light industrial and warehouse businesses with some scattered residential and commercial properties through South San Francisco. The tracks pass through the Lindenville, Downtown, Gateway and Oyster Point neighborhood planning areas. From the Bayshore Station to the Paul Avenue Station, industrial businesses are predominant and then shift to a more even distribution of light industrial businesses and residential areas through Visitacion Valley. Between the Paul Avenue and the 22nd Street Caltrain station areas, existing businesses are primarily light industrial and warehouse oriented with some residential areas. Neighborhoods in the downtown San Francisco area of the Caltrain corridor primarily consist of industrial businesses with some retail and commercial properties. Residences are primarily multi-family and/or live/work loft units. Public and recreational facilities near the Caltrain Station at Fourth and Townsend include the local post office, a fire station, the Pacific Bell Park stadium on King Street between Second and Third Streets, and the San Francisco Tennis Club on Fifth Street.

Fourth and King Station Area to Transbay Terminal Area. From the Fourth and King Station, the corridor would continue underground beneath Townsend and Second Streets to the Transbay Terminal. Related neighborhood planning areas include Mission Bay North, South of Market, South Beach, Rincon Hill, South Park, Yerba Buena Center, and New Montgomery/Second Street Conservation District.

2.5.1.3 San Jose-to-Oakland

I-880 Alignment Option

San Jose Station Area to Union City Station Area. The I-880 alignment option would begin at the San Jose/Diridon Station and proceed north in a tunnel under a variety of industrial and commercial businesses. At the intersection of the Bayshore Freeway (U.S. 101) and Nimitz Freeway (I-880) the alignment would resurface and continue on an aerial structure along I-880.

Between U.S. 101 and the Montague Expressway, the alignment passes by mostly industrial and commercial complexes. Single-family residential neighborhoods and the Pinewood Park are located in the northeast and southeast quadrants of the I-880/Montague Expressway intersection. Industrial and commercial businesses are predominant on the west between the Montague Expressway and SR-237 in the City of Milpitas. The Elmwood Rehabilitation Center and County Jail Farm are located to the east. Between SR-237 and the Alameda County Line, a residential neighborhood and Starlite Park are located on the east and the McCarthy Ranch Market Place is located to the west.

Industrial and commercial complexes predominate as the alignment continues into the Fremont Industrial neighborhood planning area. At Mission Boulevard, the alignment transitions from the I-880 corridor to the UPRR Line. Businesses are almost exclusively industrial on both sides of the UPRR tracks between

Mission Boulevard and Auto Mall Parkway. Heading north to Washington Boulevard, the corridor enters the Irvington neighborhood planning area. The Irvington commercial center spreads east on Washington Boulevard toward the railroad. Surrounding the commercial core is mostly single-family development with some apartments and condominium complexes. At Washington Boulevard, the alignment would continue underground beneath the Fremont Central Park and Lake Elizabeth in the Central neighborhood planning area. After crossing the Alameda Flood Control Channel, the alignment would return at-grade, continuing past the Quarry Lakes along the boundary of the Centerville and Niles neighborhood planning areas. At Niles Boulevard, the alignment would approach the Union City Station on an aerial structure. Office and retail businesses are located adjacent to the Union City station area, along Eleventh Street and Decoto Road. Residential neighborhoods are located to the east along Union Square. The C.F. Kennedy Park and Community Center is adjacent to the alignment at Decoto Road.

Union City Station Area to Coliseum BART Station Area. Heading north from the Union City BART Station, the alignment would pass through the historic Decoto neighborhood and continue at-grade into Hayward, pass to the east of the BART Hayward Maintenance Yard and transition to the UPRR Hayward line. Through Hayward and San Lorenzo, the UPRR corridor passes primarily through single-family residential neighborhoods. There are a number of parks and recreational facilities and several schools interspersed along the alignment in this section. As the corridor enters San Leandro, between Hesperian Boulevard and Washington Avenue, the neighborhoods remain single-family residential. Industrial businesses are predominant between Washington Avenue and Marina Boulevard, then mostly single-family residences to the San Leandro border. Entering East Oakland, the tracks pass through a residential neighborhood then past industrial areas between 98th Avenue and the Oakland Airport/Coliseum BART Station. East of the station area, residential areas contain a mix of detached housing units and other housing types. The Oakland Coliseum and Oakland Alameda County Arena are located to the west.

Coliseum BART Station Area to 12th Street/City Center Station Area. Industrial and commercial complexes predominate on both sides of the UPRR alignment through the Fruitvale and San Antonio neighborhood areas. At 18th Avenue, the corridor would either proceed in tunnel under 12th Street past Lake Merritt to the 12th Street/City Center Station area in Downtown Oakland or would continue beneath 7th Street to the West Oakland BART Station.

The 12th Street/City Center Station area is located in the heart of the Downtown Oakland Civic Center. Community facilities in the station area include the Oakland City Center, City Hall, Federal and State Buildings, Library and Frank Ogawa Plaza.

The West Oakland BART Station area is located on the western edge of a residential neighborhood. Businesses in the area are primarily commercial and service oriented. The Main Oakland Post Office is located northwest of the station area. The Port of Oakland and associated businesses are located to the southeast and southwest.

Mulford Line Alignment Option

San Jose/Diridon Station Area to Santa Clara Station Area. The Mulford Line alignment option would depart the San Jose/Diridon Station and proceed north along the UPRR corridor to the Santa Clara station area, as described above under the San Jose-to-San Francisco Alignment option.

Santa Clara Station Area to Auto Mall Parkway Station Area. From the Santa Clara Station, the Mulford Line alignment option would proceed north along the UPRR corridor past the Norman Y. Mineta San Jose International Airport. Businesses in this segment are primarily industrial and commercial. Between U.S. 101 and SR-237, the corridor continues past industrial and commercial oriented businesses and residential neighborhoods. The Santa Clara Golf and Tennis Club is located in the northern portion of this segment. North of SR-237, the UPRR tracks pass through the San Francisco Bay National Wildlife

Refuge to the Auto Mall Parkway Station area. The station area includes industrial businesses to the east and open space and the East Bay Sanitary Landfill to the west.

Auto Mall Parkway Station Area to Union City Station Area. Heading north through Newark, the UPRR tracks pass by salt ponds and light industrial businesses. The alignment continues past the Newark Civic Center and single-family neighborhood areas. Several neighborhood parks are located near the rail alignment. At I-880, the corridor enters Fremont and continues through the Centerville District residential neighborhood. Wetland areas associated with Alameda Creek are located north of the alignment as it approaches the UPRR's Niles line. The corridor crosses Alameda Creek and continues through the Niles District residential neighborhood to the Union City BART Station located near the Decoto residential district. From the Union City BART Station, the Mulford Line Option would proceed along the UPRR Hayward Line to Oakland along the same route as described above for the I-880 Alignment Option.

2.6 HOUSING

Housing characteristics of the affected environment are derived from the *2000 U.S. Census Bureau Data*. Existing housing characteristics for the study area, the 13 counties and the 12 cities within the study area are shown in Table 2.6-1.

2.6.1 Modal Alternative

Highway Improvement Options. The majority of housing units along the highway improvement options are single-family residences. Housing characteristics along the U.S. 101, I-880 and I-80 corridors are comparable. The SR-52 and I-580 corridors have higher percentages of single-family units and lower percentages of multi-family units. Ten percent of the total dwelling units along the SR-152 Corridor are mobile homes. The I-80 Corridor (San Francisco to I-880 Segment) has the lowest percentage of single-family residential units in the study area. Five percent of the total dwelling units are single-family and 94 percent are multi-family.

Aviation Improvement Options. The majority of housing units in the airport improvement study areas are single-family residences. The Oakland Airport study area has a higher percentage of single-family units and a lower percentage of multi-family units. Housing characteristics in the SJC study area are more evenly distributed between single-family and multi-family residences.

2.6.2 High-Speed Train Alternative

Alignment Options. The Merced-to-San Jose segment (Gilroy Option) has the lowest percentage of single-family residential units in the study area. Forty-two percent of the total dwelling units are single-family and 57 percent are multi-family. In comparison, the other Merced-to-San Jose alignment options (the Gilroy Bypass and all tunneling options) have approximately 50 percent single-family units, and 45 percent multi-family. The San Jose-to-San Francisco segment and San Jose-to-Oakland alignment options have similar housing characteristics, with single-family units ranging between 57 and 59 percent, multi-family units between 25 and 27 percent, and mobile homes between 15 and 16 percent. All segments and alignment options have less than 0.5 percent other housing units in their respective study areas.

Station Options. Most of the station options in the San Jose-to-San Francisco and San Jose-to-Oakland segments are located in areas with high percentages of multi-family residential units. The greatest concentration of multi-family dwelling units occurs at the Santa Clara, Coliseum BART, Palo Alto, Fourth and King, and Transbay Terminal station locations. The San Jose-to-Merced segment station areas, Los Banos, Gilroy and Morgan Hill, and the Auto Mall Parkway Station in the San Jose-to-Oakland segment,

have the lowest percentages of multi-family residential units in the station study areas. Mobile homes represent over 20 percent of the residential units in the Los Banos and Morgan Hill station areas.

Table 2.6-1 Housing Characteristics

	Total Units	Single Unit	%	Multi-Unit	%	Mobile Home	%	Other	%
MODAL ALTERNATIVE									
HIGHWAY IMPROVEMENT OPTIONS									
U.S. 101 CORRIDOR									
San Francisco to SFO	17,301	10,198	59%	7,039	41%	48	0%	16	0%
SFO to Redwood City	17,693	9,064	51%	8,594	49%	35	0%	-	0%
Redwood City to I-880	35,854	17,252	48%	15,156	42%	3,094	9%	352	1%
I-880 to San Jose	2,161	493	23%	266	12%	1,257	58%	145	7%
San Jose to Gilroy	31,753	23,831	75%	5,567	18%	2,287	7%	68	0%
Gilroy to SR-152	2,081	1,099	53%	772	37%	210	10%	-	0%
TOTAL	**104,682**	**61,444**	**59%**	**37,128**	**35%**	**5,674**	**5%**	**436**	**0%**
I-880 CORRIDOR									
I-80 to I-238	14,726	8,045	55%	5,519	37%	1,101	7%	61	0%
I-238 to Fremont/Newark	15,439	7,752	50%	7,573	49%	55	0%	59	0%
Fremont/Newark to U.S. 101	31,082	23,949	77%	5,158	17%	1,933	6%	42	0%
TOTAL	**61,247**	**39,746**	**65%**	**18,250**	**30%**	**3,089**	**5%**	**162**	**0%**
SR-152 CORRIDOR									
U.S. 101 to I-5	1,579	1,320	84%	74	5%	171	11%	14	1%
I-5 to SR-99	7,390	5,519	75%	1,152	16%	684	9%	35	0%
TOTAL	**8,969**	**6,839**	**76%**	**1,226**	**14%**	**855**	**10%**	**49**	**1%**
I-80 CORRIDOR									
San Francisco to I-880	7,283	400	5%	6,876	94%	-	0%	7	0%
I-880 to I-5 (Sacramento)	79,162	52,058	66%	23,336	29%	3,517	4%	251	0%
TOTAL	**86,445**	**52,458**	**61%**	**30,212**	**35%**	**3,517**	**4%**	**258**	**0%**
I-580 CORRIDOR									
I-880 to I-5 (via I-238)	**33,869**	**24,782**	**73%**	**8,218**	**24%**	**825**	**2%**	**44**	**0%**
MODAL ALTERNATIVE	**Total Units**	**Single Unit**	**%**	**Multi-Unit**	**%**	**Mobile Home**	**%**	**Other**	**%**
AVIATION IMPROVEMENT OPTIONS									
Oakland International Airport									
	2,787	2,425	87%	348	12%	7	>0.5%	7	>0.5%
San Jose International Airport									
	2,052	1,087	53%	965	47%	0	0%	0	0%

HIGH-SPEED TRAIN ALTERNATIVE	Total Units	Single Unit	%	Multi-Unit	%	Mobile Home	%	Other	%
SEGMENT AND ALIGNMENT OPTION									
Merced to San Jose: • Northern Tunnel Option • Tunnel Under Park Option • Minimize Tunnel Option	65,444	33,207	51%	29,541	45%	2,549	4%	147	>.5%
• Gilroy Bypass Option	64,613	33,849	52%	29,041	45%	1,629	3%	94	>.5%
• Gilroy Option	125,277	52,511	42%	71,754	57%	910	1%	102	>.5%
San Jose to Oakland: • Mulford Line Option	34,932	20,873	60%	8,580	25%	5,397	15%	82	>.5%
• I-880 Option	28,728	16,255	57%	7,890	27%	4,492	16%	91	>.5%
San Jose to San Francisco	38,708	22,938	59%	9,992	26%	5,696	15%	82	>.5%
	Total Units	**Single Unit**	**%**	**Multi-Unit**	**%**	**Mobile Home**	**%**	**Other**	**%**
STATIONS OPTIONS									
Los Banos Station	636	457	72%	35	6%	130	20%	14	2%
Gilroy Station	1,299	1,085	84%	203	16%	11	1%	0	-
Morgan Hill Station	1,774	1,280	72%	122	7%	372	21%	0	-
San Jose/Diridon Station	1,561	419	27%	1,142	73%	0	-	0	-
Santa Clara Station	264	8	3%	256	97%	0	-	0	-
Auto Mall Parkway Station	1,167	975	84%	192	16%	0	-	0	-
Union City Station	236	127	54%	102	43%	7	3%	0	-
Coliseum BART Station	500	40	8%	460	92%	0	-	0	-
12th Street/City Center Station (Oakland)	1,260	318	25%	924	73%	18	1%	0	-
West Oakland Station	503	342	68%	161	32%	0	-	0	-
Palo Alto Station	2,717	222	8%	2,495	92%	0	-	0	-
Redwood City Station	1,680	467	28%	1,213	72%	0	-	0	-
SFO Airport Station	932	551	59%	381	41%	0	-	0	-
Fourth & King Station	394	26	7%	333	85%	0	-	35	9%
Transbay Terminal	329	0	-	329	100%	0	-	0	-
	Total Units	**Single Unit**	**%**	**Multi-Unit**	**%**	**Mobile Home**	**%**	**Other**	**%**
COUNTIES									
Madera	40,387	32,195	80%	4,829	12%	3,068	8%	295	1%
Merced	68,373	50,545	74%	12,594	18%	5,079	7%	155	>.5%
San Benito	16,499	13,671	83%	1,956	12%	858	5%	14	>.5%
Stanislaus	150,807	116,699	77%	25,658	17%	8,196	5%	254	>.5%
Santa Clara	579,329	376,659	65%	182,999	32%	19,102	3%	569	>.5%
Alameda	540,183	329,359	61%	203,174	38%	6,998	1%	652	>.5%
San Mateo	260,576	173,002	66%	84,084	32%	2,969	1%	521	>.5%
San Francisco	346,527	111,405	32%	234,562	68%	377	>.5%	183	>.5%
Contra Costa	354,577	262,026	74%	84,994	24%	7,120	2%	437	<.5%
Solano	134,513	101,975	76%	27,921	21%	4,365	3%	262	<.5%
Yolo	61,587	38,872	63%	19,104	31%	3,426	6%	185	<.05 %
Sacramento	474,814	329,306	69%	130,023	27%	14,525	3%	960	<.5%

San Joaquin	189,160	140,512	74%	39,459	21%	8,736	5%	453	<.5%
	Total Units	**Single Unit**	**%**	**Multi-Unit**	**%**	**Mobile Home**	**%**	**Other**	**%**
CITIES									
Los Banos	8,071	6,609	82%	1,187	15%	267	3%	8	>.5%
Gilroy	12,167	8,510	70%	3,225	27%	432	4%	0	-
Morgan Hill	11,110	8,426	76%	1,757	16%	909	8%	18	>.5%
San Jose	281,706	189,522	67%	81,165	29%	10,658	4%	361	>.5%
Santa Clara	39,602	21,218	54%	18,275	46%	102	>.5%	7	>.5%
Fremont	69,452	48,703	70%	19,993	29%	745	1%	11	>.5%
Union City	18,862	14,312	76%	3,628	19%	922	5%	0	-
Oakland	157,505	78,069	50%	78,980	50%	364	>.5%	92	>.5%
Palo Alto	26,155	16,365	63%	9,625	37%	156	1%	9	>.5%
Redwood City	28,928	17,150	59%	10,945	38%	570	2%	263	1%
Millbrae	8,114	5,586	69%	2,517	31%	11	>.5%	0	-
San Francisco	346,527	111,405	32%	234,562	68%	377	>.5%	183	>.5%

Source: 2000 U.S. Census Data

3.0 EVALUATION METHODOLOGY

A. METHODS OF EVALUATION OF IMPACTS

The analysis was conducted using existing U.S. Census 2000 tract information/data compiled in a geographic information system (GIS) format, local community general plans or regional plans, as well as land use information provided by the planning agencies in each of the regions. Existing and future baseline conditions were established for the No Project Alternative by documenting existing information for existing and planned future land use policy in station and airport areas, development patterns for employment and population growth, demographics, communities and neighborhoods, housing, and economics. The No Project Alternative was compared to the future baseline plans to see if there would be potential effects on future development. Chapter 2 lists and discusses the general and regional plans.

Ranking systems were established to evaluate potential impacts for all three alternatives for land use compatibility, communities and neighborhoods, property, and environmental justice. Because this is a programmatic environmental review, the analysis of these potential impacts was performed on a broad scale to permit a comparison of relative differences of proposed alternatives. A more detailed analysis would be required at the project-level environmental review, should a decision be made to proceed with the proposed HST system.

Land Use Compatibility

The compatibility of the alternatives with existing land use is evaluated for highways, airports, and proposed HST alignments, stations, and maintenance facility areas. Compatibility is based on the potential sensitivity of various land uses to the changes included with the Modal and HST Alternatives, and the impact of these changes on the land use. For example, homes and schools are more sensitive to changes that may result in increased noise and vibration (see *Noise and Vibration* technical reports*)* or increased levels of traffic congestion (see *Traffic and Circulation* technical reports*).* Industrial uses, however, are typically less sensitive to these types of changes because they interfere less with normal industrial activities. Given that an area's sensitivity or compatibility is based on the presence of residential properties, low, medium, and high levels of compatibility are identified based on the percentage of residential area affected, the proximity of the residential area to proposed modal or HST system facilities, and the presence of local or regional uses (such as parks, schools, and employment centers.). For highway corridors (under the No Project and Modal Alternatives) and for proposed HST alignments, land use compatibility was assessed using GIS layers (or aerial photographs where available) to identify proximity to housing and population and to determine whether the alignments would be within an existing right-of-way or a new transportation corridor in the area. Compatibility impacts are considered low if existing land uses within proposed alignment, station, airport, and maintenance facility areas are found to be compatible with proposed changes associated with either the Modal or HST Alternative. The type of improvement that would be associated with either the Modal or HST Alternative would also affect the level of potential impact, particularly for agricultural land. Improvements such as widening of the existing right-of-way or the need for new right-of-way were considered to have a low compatibility with agricultural land. Conversely, if the improvement would be contained within the existing right-of-way or within a tunnel, the alternative was considered to be highly compatible with agricultural land.

Future land use compatibility is based on information from general plans and other regional and local transportation planning documents. Each document was examined to determine whether a project alternative would be highly compatible with the goals and objectives defined therein. The Modal Alternative is considered compatible if the highway or airport improvement is in the regional transportation plan (RTP) or regional airport master plan. The HST Alternative is considered highly compatible if it would be located in areas planned for transportation multi-modal centers or corridor development, redevelopment, economic revitalization, transit-oriented development, or high-intensity employment. Impacts are considered low if a project alternative is determined incompatible with local or regional planning documents. Table 3.0-1 summarizes the level of compatibility of existing land use types with proposed alignment options, station areas, maintenance facilities, and airports.

Table 3.0-1
Compatibility of Land Use Types

Low Compatibility	Medium Compatibility	High Compatibility
Single-family residential, neighborhood park, habitat conservation area, elementary/middle school, agricultural (widened or new right-of-way needed)	Multifamily residential, high schools, community parks, low-intensity industrial, hospitals	Business park/ regional commercial, multifamily residential, existing or planned transit center, high intensity industrial park, service commercial, commercial recreation, college, transportation/utilities, high-intensity government facilities, airport or train station, agricultural (tunnel or no new right-of-way needed)

Communities and Neighborhoods

A potential impact on a community or neighborhood was identified if any of the proposed alignment options or facilities associated with each of the project alternatives would create a new physical barrier, isolating one part of an established community from another and resulting in a physical disruption to community cohesion. Improvements to existing transportation corridors, including grade separations, would not generally result in a new barrier.

Property

Assessment of potential property impacts is based on the types of land uses adjacent to the particular proposed alignment, the amount of right-of-way potentially affected by the construction type, and the land use sensitivity to potential impacts. Impacts include potential acquisition, relocation, or demolition of properties. Potential property impacts were ranked high, medium, or low as summarized below in Table 3.0-2.

Table 3.0-2
Rankings of Potential Property Impacts

Facility Requirements	Type of Development						
	Residential			Non-residential			
	Rural/ Suburban	Suburban/ Urban	Urban	Rural Developed	Suburban Industrial/ Commercial	Urban Business Parks/ Regional Commercial	Rural Non-developed
No additional right-of-way needed (also applies to tunnel segments for HST Alternative)	Low	Low	Low	Low	Low	Low	Low
Widening of existing right-of-way required	Medium	Medium	High	Low	Medium	High	Low
New corridor (new right-of-way required; includes aerial and at-grade arrangements)	High	High	High	Medium	Medium	High	Low to medium

To determine potential property impacts, the 0.25-mi (.40–km) study area was characterized by its density of development. Densities of structures, buildings, and other elements of the built environment are generally higher in urbanized areas. *Rural/suburban* residential refers to low-density, single-family homes. *Suburban/urban* is medium density, multifamily housing such as townhouses, duplexes, and mobile homes. *Urban residential* refers to high-density multifamily housing such as apartment buildings. *Rural developed* non-residential uses typically occur in non-urbanized areas and often include developed agricultural land such as vineyards and orchards. *Suburban industrial/commercial* refers to medium density non-residential uses and includes some industrial uses, as well as transportation, utilities, and communication facilities. *Urban business parks/regional commercial* refers to non-residential uses that occur in urbanized areas and includes such uses as business parks, regional commercial facilities, and other mixed use/built-up uses. *Non-rural undeveloped land* includes cropland, pasture, rangeland, and barren land. The classification of development types was based on land use information provided by the planning agencies in each of the regions.

The complete property impact analysis was prepared separately from this technical report ("California High-Speed Train Program EIR/EIS Potential Property Impacts Technical Evaluation Memo," P&D Environmental, August 15, 2003. Revised January 2004.)

Environmental Justice

This analysis is based on two basic criteria: 1) Is an environmental justice population (i.e., minority or low-income population) present in the study area (0.25 mi [0.40 km] from the alignment), and 2) What is the potential for an adverse impact (low or high)? This assessment was done using U.S. Census 2000 information and alignment information to determine if the

populations exist within the study areas and if they do, whether the alignments would be within or adjacent to the right-of-way (low potential impact) or new alignments (high potential impact).

The presence of environmental justice populations was determined by following the guidelines mentioned in the regulatory section.

- At least 50% of the population in the project study is minority or low-income.
- The percentage of minority or low-income population in the project study area is at least 10% greater than the average in the county or community.

The potential for environmental justice impacts was assessed based on the size and type of right of way required for the project. For example, if an alignment was within an existing right-of-way, the potential impact was low. If the alignment was on a new alignment through an identified environmental justice neighborhood, then the potential impact was considered high. Since this is a program-level document with no preferred alternative, alignment, or stations, it is not possible to determine whether these populations would be adversely impacted disproportionately. Further study would be required to determine the type and extent of any possible impacts, and any potential benefits from the location of an HST station within the community. Such study would take place during project-level analysis.

4.0 IMPACTS

Potential project effects of the No-Project, Modal and HST alternatives on existing and planned land use, environmental justice populations, community cohesion, and residential and non-residential relocation are described below and summarized in Table 4.1-1.

4.1 NO-PROJECT ALTERNATIVE

The No-Project Alternative assumes that others would complete projects (both public works and private development) including local, state, and interstate transportation system improvements designated in existing plans and programs. No additional land use or community impacts would occur beyond those addressed in environmental documents for those projects. Potential project effects of the No-Project Alternative are extracted from the *2001 Regional Transportation Plan Environmental Impact Report*.

4.1.1 Land Use Compatibility

Construction of certain transportation improvements under the No-Project Alternative such as the expansion of existing facilities and the construction of new facilities, could result in the conversion of resource lands to transportation use. Most of the transportation improvements, however, would occur within developed areas and existing corridors; therefore, the conversion of resource land is likely to be limited.

The No-Project Alternative would be inconsistent with local and regional plans that support the development of multi-modal transportation systems, including intercity rail systems. The No-Project Alternative would support a long-term dispersed pattern of development in the Bay Area-to-Merced region. This would be inconsistent with local and regional land use planning objectives that promote transit-oriented higher-density development around transit nodes as the key to more orderly and sustainable growth.

Table 4.1-1
Analysis/Comparison Table
Impacts to Land Use and Planning, Communities and Neighborhoods, Property, and Environmental Justice
(Bay Area-to-Merced)

	Incompati-bility w/ Existing Land Uses (Station Areas/ Airports/ Maintenance Facilities) (H,M,L)	Incompati-bility w/ Local Plans (Station Areas/ Airports/ Maintenance Facilities) (H,M,L)	Environ-mental Justice Impacts (Y/N)	Divides an Established Community (Y/N)[1]	Potential Property Impacts (H,M,L)[2]	
NO-PROJECT*	NA	NA	NA	Y Some transportation improvements could result in community disruption.	L	L

	Incompatibility w/ Existing Land Uses (Station Areas/ Airports/ Maintenance Facilities) (H,M,L)	Incompatibility w/ Local Plans (Station Areas/ Airports/ Maintenance Facilities) (H,M,L)	Environmental Justice Impacts (Y/N)	Divides an Established Community (Y/N)[1]	Potential Property Impacts (H,M,L)[2]	
MODAL*						
Highway Improvement Options						
U.S. 101 Corridor	H	H	Y	N	Low – 22% Medium – 29% High – 49% H	
I-880 Corridor	H	H	Y	N	Low – 5% Medium – 22% High – 74% H	
SR-152 Corridor	M	H	Y	N	Low – 93% Medium – 4% High – 3% L	
I-80 Corridor	M	H	Y	N	Low – 35% Medium – 16% High – 49% H	
I-580 Corridor	M	H	N	N	Low – 49% Medium – 8% High – 43% L	
Aviation Improvement Options						
Oakland International Airport	L Improvements primarily constructed in existing ROW	L Consistent with Oakland General Plan	Y	N	n/a	
San Jose International Airport	H Incompatible with residential use.	L Consistent with San Jose General Plan	Y	Y Potential community cohesion effects on single-family neighborhood.	n/a	
HST CORRIDOR & STATION OPTIONS						
MERCED TO SAN JOSE						
Alignments						
- Northern Tunnel	H	L	Y	N	Low – 97% Medium – 1% High – 2% L	
- Tunnel Under Park	H	L	Y	N	Low – 92% Medium – 3% High – 5% L	
- Minimize Tunnel	H	L	Y	N	Low – 93% Medium – 3% High – 4% L	

	Incompatibility w/ Existing Land Uses (Station Areas/ Airports/ Maintenance Facilities) (H,M,L)	Incompatibility w/ Local Plans (Station Areas/ Airports/ Maintenance Facilities) (H,M,L)	Environmental Justice Impacts (Y/N)	Divides an Established Community (Y/N)[1]	Potential Property Impacts (H,M,L)[2]	
- Gilroy Bypass	L-M	L	Y	N	Low – 96% Medium – 2% High – 2% L	
- Gilroy	L-M		Y	N	Low – 96% Medium – 2% High – 2% L	
Stations						
- Los Banos	L – M Compatible with I-5 Corridor, commercial/ industrial uses. Incompatible with agricultural and single-family residential use.	L Consistent with plans to develop rail transportation modes.	Y	N	n/a	
- Gilroy	M Compatible with Gilroy Caltrain Station and commercial uses .Incompatible with single-family residential use.	L Consistent with development of multi-modal transit center, higher density residential and mixed uses.	Y	N	n/a	
- Morgan Hill	L Compatible with Morgan Hill Caltrain Station.	L Consistent with development of multi-modal transit center.	N	N	n/a	
- San Jose /Diridon Station	L Compatible with San Jose/ Diridon Station and downtown uses.	L Consistent with redevelopment plans for downtown.	N	N	n/a	
SAN JOSE TO SAN FRANCISCO						
Alignments						
- Caltrain Corridor	L	L	Y	N	Low – 97% Medium – 2% High – 1% L	
Stations						
- San Jose / Diridon	L Compatible with San Jose/ Diridon Station and downtown uses.	L Consistent with redevelopment plans for downtown.	N	N	n/a	
- Santa Clara	L	L	Y	N	n/a	

	Incompati-bility w/ Existing Land Uses (Station Areas/ Airports/ Maintenance Facilities) (H,M,L)	Incompati-bility w/ Local Plans (Station Areas/ Airports/ Maintenance Facilities) (H,M,L)	Environ-mental Justice Impacts (Y/N)	Divides an Established Community (Y/N)[1]	Potential Property Impacts (H,M,L)[2]	
	Compatible with Santa Clara Caltrain Station and Santa Clara University.	Consistent with development of multi-modal transit center.				
- Palo Alto	L Compatible with Palo Alto Caltrain Station, Stanford University, multi-family residential and commercial uses.	L Consistent with development of multi-modal transit center.	N	N	n/a	
- Redwood City	L Compatible with Redwood City Caltrain Station and downtown oriented uses.	L Consistent with plans to develop transit alternatives to the automobile.	N	N	n/a	
- SFO Airport	L Compatible with Millbrae BART/ Caltrain Station.	L Consistent with development of multi-modal transit center.	N	N	n/a	
- 4th & King	L Compatible with 4th & King Caltrain Station.	L Consistent with plans for the Mission Bay Redevelopment Area.	N	N	n/a	
- Transbay Terminal	L Compatible with Transbay Terminal and S.F. Financial District.	L Consistent with plans for the Transbay Terminal Area.	N	N	n/a	
SAN JOSE TO OAKLAND						
Alignments						
- I-880	L	L	Y	N	Low – 79% Medium – 11% High – 10% L	
- Mulford Line	H	L	Y	N	Low – 98% Medium – 2% High – 1% L	
Stations						
- San Jose /Diridon	L Compatible with San Jose/ Diridon Station,	L Consistent with redevelopment plans for	N	N	n/a	

	Incompatibility w/ Existing Land Uses (Station Areas/ Airports/ Maintenance Facilities) (H,M,L)	Incompatibility w/ Local Plans (Station Areas/ Airports/ Maintenance Facilities) (H,M,L)	Environmental Justice Impacts (Y/N)	Divides an Established Community (Y/N)[1]	Potential Property Impacts (H,M,L)[2]	
	multi-family residential and downtown uses.	downtown.				
- Santa Clara	L Compatible with Santa Clara Caltrain Station, medium-density residential uses and Santa Clara University.	L Consistent with development of multi-modal transit center.	Y	N	n/a	
- Auto Mall Parkway	L - M Compatible with UPRR Corridor and commercial and industrial uses. Currently no high-density uses.	L Consistent with plans for development of transit center and expansion of commercial/industrial uses.	Y	N	n/a	
- Union City	L-M Compatible with Union City BART Station, commercial and industrial uses. Incompatible with single-family residential uses.	L Consistent with plans for development of a regional intermodal facility and research and development campus.	Y	N	n/a	
- Coliseum BART	L Compatible with Oakland Airport/ Coliseum BART Station and industrial/ commercial uses.	L Consistent with plans for transit oriented district and an intermodal transfer point.	Y	N	n/a	
- 12th Street / City Center	L Compatible with 12th/City Center BART Station, downtown and civic center uses.	L Consistent with plans to develop a transit oriented district.	Y	N	n/a	
- West Oakland	L - M Compatible with West Oakland BART Station. Incompatible with existing single-family residential uses.	L Consistent with plans to develop a transit oriented district and increased density of land use.	Y	N	n/a	

Notes:

[1] "Y" in the Environmental Justice column means that minority or low-income populations have been identified within the study area at some location along the potential alignment.

[2] The analysis of potential property impacts is based on the types of land uses adjacent to the particular alignment, the amount of right-of-way potentially affected by the construction type and the land use sensitivity to potential impacts and was ranked "high," "medium," and "low" as summarized in Chapter 3.0 of this document. Proposed station sites were as analyzed as part of each rail alignment and were not analyzed separately.

4.1.2 Environmental Justice

The No-Project Alternative would include some transportation improvements to be located in areas with minority and low-income populations. Future project-specific environmental analyses are required to identify potential disproportionate effects on these communities.

4.1.3 Community/Neighborhood Impacts (Community Cohesion)

Some transportation improvements proposed under the No-Project Alternative, such as the expansion of existing facilities and the construction of new facilities have the potential to disrupt or divide a community by separating community facilities, restricting community access to the region or eliminating community amenities. Future project-specific analyses are required to identify potential community cohesion effects.

4.2 MODAL ALTERNATIVE

4.2.1 Land Use Compatibility and Consistency Issues of the Major Airport Expansion and Highway System or Interchange Additions

4.2.1.1 Highway Improvement Options

All of the highway improvement options would be constructed within or adjacent to existing transportation corridors. Proximity of the highway improvement options to housing and business-type uses is discussed below.

U.S. 101. The U.S. 101 highway improvement option would have low to medium compatibility with adjacent land use. An estimated 31 percent of the U.S. 101 corridor would be adjacent to residential land uses. Commercial and industrial land use along the alignment represents approximately 32 percent. The remaining land use along the corridor is primarily agricultural, range and barren land and other urban uses.

I-880. The I-880 highway improvement option would have low to medium compatibility with adjacent land use. The predominate land uses along the I-880 corridor are industrial and commercial, representing approximately 55 percent. An estimated 32 percent of the corridor would be adjacent to residential land uses.

SR-152. The SR-152 highway improvement option would have medium compatibility with adjacent land use. An estimated 87 percent of the land adjacent to the SR 152 corridor would be agricultural, forest, range or barren land. Residential and industrial/commercial land use each represent approximately six percent.

I-80. The I-80 highway improvement option would have medium compatibility with adjacent land use. An estimated 38 percent of the land adjacent to the I-80 corridor is agricultural, range and barren land. Approximately 25 percent of the corridor would be near residential land. Twenty-four percent of the property along the alignment is commercial and industrial.

I-580. The I-580 highway improvement option would have medium compatibility with adjacent land use. Sixty-three percent of the land adjacent to the I-580 corridor is agricultural, forest, range or barren land. Approximately 16 percent of the corridor would border residential uses. Eleven percent of the property along the alignment is commercial and industrial.

The highway improvement options would be inconsistent with General Plan policies that support increased transportation alternatives and reduced dependency on the automobile. The highway improvement options would support a long-term dispersed pattern of development in the Bay Area-to-Merced region. This would be inconsistent with local and regional land use planning objectives that promote transit-oriented higher-density development around transit nodes as the key to more orderly and sustainable growth.

4.2.1.2 Aviation Improvement Options

Oakland International Airport. Aviation improvements at the OAK would primarily be constructed within existing transportation, industrial and commercial properties. There are no residential uses adjacent to the airport. Land use conflicts would be associated with the extent of San Francisco Bay fill required to modify runways. Aviation improvements would be consistent with the *City of Oakland General Plan* that supports expansion of passenger and cargo handling capacity at the Oakland International Airport.

San Jose International Airport. The SJC aviation improvements would occur mostly within existing transportation, industrial and commercial properties. Construction of runways on the western side of the facility would be incompatible with existing residential land uses. Aviation improvements would be consistent with the *City of San Jose 2020 General Plan* that supports improvements to the San Jose International Airport as identified in the *Airport Master Plan*.

4.2.2 Environmental Justice

4.2.2.1 Environmental Justice Setting

Highway Improvement Options. As described in Section 2.4.3, all of the highway improvement options, with the exception of the I-580 corridor, have substantial percentages of environmental justice populations based on ethnicity.

Aviation Improvement Options. The OAK and the SJC study areas both have substantial percentages of environmental justice populations based on minority status.

4.2.3 Community/Neighborhood Impacts (Community Cohesion)

4.2.3.1 Highway Improvement Options

The highway improvement options would be constructed within or adjacent to existing transportation corridors and therefore are not anticipated to create new physical or psychological barriers that would divide, disrupt or isolate neighborhoods, individuals, or community focal points along the corridors.

4.2.3.2 Aviation Improvement Options

Oakland International Airport. The OAK improvement option would not affect community cohesion. Implementation of this option would expand airport facilities within existing transportation, commercial and industrial properties; no new physical or psychological barriers would divide an established community.

San Jose International Airport. Aviation improvements at the SJC would be within existing transportation, industrial and commercial areas. Construction of runways on the western side of the airport may result in community cohesion effects.

4.2.4 Property

The highest potential for property impacts due to Modal Alternative highway improvements would occur primarily in urbanized and built-up areas, such as US-101 between San Francisco and San Jose, I-80 between Oakland and Solano County, and most of I-880. Other areas of potential high impacts include the western portion of I-580, and I-80 in the Dixon area. In these locations, the existing facility is built out to the edge of the right-of-way; expansion of these facilities would require additional right-of-way and would have a greater potential for impacting the adjacent dense development.

The lowest potential for property impacts would occur in areas where the densities of development are lower, such as I-580 west of I-5, SR-152, and US-101 south of the San Jose area. Overall, about 140 mi (225 km) of highway alignment improvements (40% of total highway length in the region) would potentially result in high property impacts, and 54 mi (87 km) of alignment (15% of total Modal Alternative highway alignment in the region) would potentially result in medium impacts. About 158 ac (64 ha) around OAK and SJC would potentially result in high property impacts, and 533 ac (216 ha) would potentially result in medium property impacts.

4.3 HIGH-SPEED TRAIN ALTERNATIVE

4.3.1 Land Use Compatibility and Consistency Issues of Alignment Options

4.3.1.1 Merced-to-San Jose

Northern Tunnel Option. The Northern Tunnel Option would require the construction of a new transportation corridor from its eastern terminus north of Merced to the intersection with the Caltrain/UPRR corridor. This segment of the corridor would have low to medium levels of land use compatibility because it would primarily pass through agricultural land and in a series of tunnels beneath the Diablo Mountain Range.

Heading north to the San Jose/Diridon Station, the Northern Tunnel Option would have medium to high levels of land use compatibility because it would primarily be within or adjacent to the Caltrain/UPRR rail corridor. Land use along the alignment increases in density as the corridor approaches the San Jose/Diridon Station.

Tunnel Under Park Option. The Tunnel Under Park Option would require the construction of a new transportation corridor from its eastern terminus north of Merced to the intersection with the Caltrain/UPRR corridor. This segment of the corridor would have low to medium levels of land use compatibility because it would primarily pass through agricultural land and in tunnel beneath the Henry W. Coe State Park.

Heading north to the San Jose/Diridon Station, the Tunnel Under Park Option would have medium to high levels of land use compatibility because it would primarily be within or adjacent to the Caltrain/UPRR rail corridor. Land use along the alignment increases in density as the corridor approaches the San Jose/Diridon Station.

Minimize Tunnel Option. The Minimize Tunnel Option would require the construction of a new transportation corridor from its eastern terminus north of Merced to the intersection with the Caltrain/UPRR corridor. This segment of the corridor would have low levels of land use compatibility because it would cross at-grade through a portion of the Henry W. Coe State Park.

Heading north to the San Jose/Diridon Station, the Minimize Tunnel Option would have medium to high levels of land use compatibility because it would primarily be within or adjacent to the Caltrain/UPRR rail corridor. Land use along the alignment increases in density as the corridor approaches the San Jose/Diridon Station.

Gilroy Bypass. The Gilroy Bypass Option would require the construction of a new transportation corridor from its eastern terminus at Merced to the Caltrain/UPRR corridor just north of Gilroy. The corridor would pass through mostly agricultural land to the Los Banos Station area as described in Section 4.3.2. From the Los Banos Station to the Caltrain/UPRR rail corridor, land use compatibility levels would be low to medium because the alignment would pass through agricultural land and then continue in tunnel under forest land and the San Luis National Wildlife Reserve, returning at-grade through the Pacheco Creek Valley and Santa Clara Valley agricultural lands.

Heading north to the San Jose/Diridon Station, the Gilroy Bypass Option would have medium to high levels of land use compatibility because it would primarily be within or adjacent to the Caltrain/UPRR rail corridor. Land use along the alignment increases in density as the corridor approaches the San Jose/Diridon Station.

Gilroy. Land use compatibility levels for the Gilroy alignment option would be similar to the Gilroy Bypass option as described above. The alignment would, however, be more compatible because it would extend further south to connect with the UPRR alignment and continue to a station at Gilroy.

4.3.1.2 San Jose-to-San Francisco

The San Jose-to-San Francisco alignment option would be highly compatible with existing land use because it would be constructed primarily within the existing Caltrain corridor.

4.3.1.3 San Jose-to-Oakland

I-880 Option. The I-880 alignment option would have medium to high levels of land use compatibility because it would be constructed primarily within or adjacent to the I-880 or UPRR corridor.

Mulford Line Option. Land use compatibility levels for the Mulford Line alignment option would be high because it would be constructed within the UPRR corridor.

4.3.2 Land Use Compatibility and Consistency Issues of Proposed Station Sites and Ancillary Facilities

4.3.2.1 Merced-to-San Jose

Los Banos Station. The Los Banos Station option would be constructed on agricultural property located between the San Luis Wasteway and Henry Miller Drive just east of I-5 and the community of Santa Nella. Although the proposed station would require the conversion of agricultural land to transportation use, these land use changes are not anticipated to be substantially adverse given its proposed location between a water wasteway and a rural road. Existing development in the vicinity of the station area is extremely sparse, consisting primarily of interstate and commercial services; therefore, no major land use conflicts are anticipated. The proposed station location would be compatible with planned industrial and commercial uses and the adjacent I-5 transportation corridor.

Gilroy Station. The Gilroy Station option would be located near the existing Caltrain station in the City of Gilroy. Current land use adjoining the existing Gilroy station is primarily commercial and single-family residential. The proposed station would be consistent with policies and actions stated in the *Gilroy General Plan* that place a high priority on strengthening and restoring the downtown area including the development of an active multi-modal transit center. Although the proposed station would be incompatible with the existing low-density residential uses, the *General Plan* promotes the future development of higher-density residential and mixed uses in close proximity to the Caltrain station and the multi-modal transit center.

Morgan Hill Station. The Morgan Hill Station option would be compatible with the existing Caltrain station and nearby commercial/service oriented and other urban uses. The station would be consistent with the *City of Morgan Hill General Plan* policies that support the expansion of alternative transportation systems, as well as the development of a multi-modal transit transfer center.

San Jose/Diridon Station. An HST station at San Jose/Diridon would be compatible with the transportation use associated with the San Jose/Diridon Caltrain station and with the surrounding industrial and high-density residential uses at this location. The station would be consistent with the *San Jose Downtown Strategy Plan* that promotes redevelopment of the downtown towards the west and closer to the station.

4.3.2.2 San Jose-to-San Francisco

Santa Clara Station. An underground HST station at the Santa Clara Caltrain station location would be compatible with existing industrial, commercial and medium-density residential uses and the nearby Santa Clara University and San Jose International Airport. The Santa Clara Station option would be consistent with the City's plans to develop a multi-modal transfer station that could accommodate passenger service from an intercity rail system. The *City of Santa Clara General Plan* identifies intercity rail systems as vitally important for the movement of people and goods over long distances and recognizes the importance of planning for appropriate land use densities to support an inter-regional rail system.

Palo Alto Station. An HST station at Palo Alto would be supportive of existing land use in the area including multi-family housing and other facilities associated with Stanford University. The Palo Alto Station option would be consistent with the *Palo Alto Comprehensive Plan* that supports the continued development and improvement of the University Avenue Multi-modal Transit Station. The Plan is supportive of a quiet, fast rail system that encircles the Bay, and the development for intra-county and transbay transit systems that link Palo Alto to the rest of Santa Clara County and adjoining counties. Construction of the Palo Alto station option, parking garage and ancillary facilities would entail conversion of approximately ten acres of industrial property to transportation use.

Redwood City Station. An underground HST station at Redwood City would be compatible with the existing Caltrain station and adjacent downtown commercial/service oriented uses. The station would be consistent with the *Redwood City Strategic General Plan* that promotes development of convenient transit alternatives to the use of the automobile and the permanent preservation of the UPRR right-of-way for a fixed rail rapid transit system.

SFO Airport Station. The SFO Airport Station option would support future planned use for the creation of a transit-oriented district surrounding the Millbrae BART/Caltrain Station area. Construction of the HST parking and drop-off facilities would convert approximately two acres of commercial property to transportation use.

Fourth and King Station. An underground HST station location at Fourth and King in the City of San Francisco would be compatible with the existing Caltrain station and yard under which it would be

located. The Fourth and King Station location would support other land use in the vicinity of the Caltrain Station including Pacific Bell Park and the Mission Bay Redevelopment area.

Transbay Terminal. An underground HST station location at the Transbay Terminal in downtown San Francisco would be consistent with the existing transportation use at the terminal site. The Transbay Terminal location would be supportive of the high-intensity land use associated with the San Francisco Financial district.

4.3.2.3 San Jose-to-Oakland

Auto Mall Parkway Station. The Auto Mall Parkway Station would be constructed within the UPRR corridor just east of the East Bay Solid Waste Facility. Currently there are no high-intensity land uses in the vicinity of the proposed station, however, the *Fremont General Plan* identifies this area for a transit center and proposes the expansion of commercial and industrial uses at this location.

Union City Station. An HST station at the Union City BART station location would be consistent with the *Union City General Plan* to implement policies for development of a regional intermodal facility at this location. The station would be supportive of future planned land use to develop a research and development campus in the vicinity of the station location.

Coliseum BART Station. The Coliseum BART Station option would be compatible with the nearby industrial complexes and the commercial and service uses associated with the Oakland Coliseum and Oakland Alameda County Arena. The proposed station would be consistent with the *City of Oakland General Plan* that designates the station area as a transit oriented district and as an intermodal transfer point.

12th Street/City Center Station. An underground HST station at 12th Street in the City of Oakland would be compatible with the existing civic center and high-intensity commercial and service uses associated with Downtown Oakland. The proposed station would be consistent with the existing 12th Street/City Center BART Station and would support policies in the *Oakland General Plan* that designate the 12th Street/City Center station area as a transit oriented district.

West Oakland Station. An underground HST station at West Oakland would be compatible with the existing West Oakland BART Station at this location. Existing residential uses in the vicinity are primarily single family, however, the *Oakland General Plan* designates the West Oakland Station area as a transit oriented district and proposes increased intensity of use over the planning period. Approximately two acres of land would be acquired for construction of the West Oakland Station parking area. The property that would be acquired is currently in transportation/utility use; therefore, no land use conflict would occur.

4.3.3 Environmental Justice

4.3.2.1 Environmental Justice Setting

Alignment Options. As described in section 2.4.3, the HST study area as a whole consists of a variety of neighborhoods and a diverse, multi-ethnic population. All of the HST alignment options have substantial percentages of environmental justice populations based on ethnicity. Over 50 percent of the populations along all of the HST segments and alignment options are members of minority groups, including high concentrations of Hispanic and Asian populations.

Station Options. Eight of the station option locations have substantial percentages of environmental justice populations based on ethnicity and/or low income, as described below.

Los Banos Station Area. An estimated 60 percent of the total population in the Los Banos Station study area are members of minority groups. Low-income populations in the station area represent 24 percent, which is substantially higher than the City of Los Banos with 12 percent.

Gilroy Station Area. Ethnic minorities represent 59 percent of the total population in the Gilroy Station study area.

Santa Clara Station Area. Minority populations represent 72 percent of the total population in the Santa Clara Station study area.

Union City Station Area. Ethnic minorities represent 90 percent of the total population in the Union City Station study area.

Auto Mall Parkway Station Area. Seventy-two percent of the total population in the Auto Mall Parkway Station study area are minorities. Low-income populations in the station area represent 22 percent, which is substantially higher than the city of Fremont with five percent.

Coliseum BART Station Area. Ethnic minorities represent 100 percent of the total population in the Coliseum BART Station study area. Fifty-four percent of the total population in the station area is below poverty level.

12th Street/City Center Station Area. Eighty-five percent of the total population in the 12th Street/City Center Station study area are members of minority groups. Low-income populations in the station area represent 38 percent of the total, which is substantially higher than the City of Oakland with 19 percent.

West Oakland Station Area. Ethnic minorities represent 91 percent of the total population in the West Oakland Station study area. Thirty-eight percent of the total population is below poverty level, which is substantially higher than the City of Oakland with 19 percent.

4.3.4 Community/Neighborhood Impacts (Community Cohesion)

4.3.4.1 Merced-to-San Jose

Northern Tunnel Option. Along the eastern segment of the Northern Tunnel Option, the alignment would pass primarily through agricultural land or would be constructed beneath grade and therefore would have no effect on community cohesion. At the U.S. 101 and SR-85 crossing, the alignment would pass by a single-family residential area and a mobile home park, resulting in the potential relocation of residential properties. These residential neighborhoods would not be physically divided by the alignment and no effect on community cohesion is anticipated. North of SR-85, the alignment would continue primarily within or adjacent to the Caltrain/UPRR rail corridor to the San Jose/Diridon Station, and would not result in community cohesion effects.

Tunnel Under Park Option. The Tunnel Under Park alignment option would be similar to the Northern Tunnel Option between its eastern terminus north of Merced and the California Aqueduct. At the Diablo Mountain range, the corridor would continue southwest under the Henry Coe State Park. The alignment

would be constructed primarily within tunnel at this location and no effect on community cohesion is anticipated. The corridor would cross over U.S. 101 and SR-85, and pass by the residential areas, described above, resulting in no effects on community cohesion. The alignment would then connect with the Caltrain/UPRR rail corridor north of SR-85 and continue to the San Jose/Diridon Station.

Minimize Tunnel Option. The Minimize Tunnel alignment option would be similar to the Tunnel Under Park option except that it would cross at-grade through a portion of the Henry W. Coe State Park. Although the alignment would create a new physical barrier within the park, no neighborhoods would be divided at this location. The corridor would cross over U.S. 101 and SR-85, passing by the residential areas, as described above. The alignment would then connect with the Caltrain/UPRR rail corridor north of SR-85 and continue to the San Jose/Diridon Station.

Gilroy Bypass. The Gilroy Bypass alignment option would extend west from Merced through agricultural lands, passing north of the City of Los Banos to the Los Banos station option location. East of I-5 the alignment would create a new physical barrier through industrial and commercial properties within the town of Santa Nella, however, no residential neighborhoods would be divided at this location and no effect on community cohesion is anticipated. The corridor would then pass north of the City of Gilroy through mostly agricultural land, cross U.S. 101 and connect with the existing Caltrain/UPRR rail corridor north of Gilroy.

Gilroy. The Gilroy alignment option would be similar to the Gilroy Bypass option except that it would connect with the UPRR alignment south of Gilroy and proceed to a station location within the city. Because the alignment would pass primarily through agricultural land or be within or adjacent to an existing transportation corridor, no effect on community cohesion is expected.

4.3.4.2 San Jose-to-San Francisco

The San Jose-to-San Francisco corridor would be primarily within an existing, active commuter and freight rail corridor and therefore would not constitute any new physical or psychological barriers that would divide, disrupt or isolate neighborhoods, individuals, or community focal points in the corridor. Construction of grade separations along the alignment between San Jose and San Francisco would have a beneficial effect on community cohesion by improving circulation between neighborhood areas. Between the Fourth and King Caltrain Station and the Transbay Terminal, the corridor would be constructed underground and would not have an effect on community cohesion.

4.3.4.3 San Jose-to-Oakland

I-880 Option. The I-880 alignment option would have no effect on community cohesion because it would be constructed either within tunnel, on an aerial structure adjacent to or within the I-880 corridor, or within the UPRR rail line. Although the alignment option would require the relocation of residential property, it would not create a new physical barrier within an existing neighborhood.

Mulford Line Option. The Mulford Line alignment option would have no effect on community cohesion because it would be constructed primarily within the UPRR right-of-way or beneath grade. Although the alignment option would require the relocation of residential property, it would not create a new physical barrier within an existing neighborhood.

4.3.5 Property

The proposed San Jose to Merced alignment options would require new right-of-way. However, since these alignments would traverse areas with agricultural or open space land uses, they would be expected

to result in a low potential for property impacts on homes or buildings. Areas of potentially high property impacts would be expected in built-up locations where the alignments would be located adjacent to the existing transportation corridor or in a new corridor. This would occur in San Francisco south of the proposed 4th and King Station on the Caltrain alignment, and north of the proposed San Jose Station on the I-880 alignment. Between 3 mi (5km) and 11 mi (18 km) of rail alignment and station locations in the Bay Area to Merced region (between 1% and 5% of total alignment) would potentially result in high property impacts, and between 4 mi (5km) and 9 mi (14 km) of alignment and station locations (between 2% and 5% of total alignment) would potentially result in medium land use impacts. Overall, there would be a low potential for property impacts in this region because the rail improvements would be contained within existing right-of-way or in new corridors that are in tunnels or traverse open space.

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